

TC-K444

AEP Model
UK Model
E Model



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STEREO-CASSETTE DECK

SPECIFICATIONS


- Recording System:** 4-track 2-channel stereo
- Fast-forward and Rewind Time:** Approx. 90 sec. (with C-60 cassette)
- Frequency Response:**
- DOLBY NR OFF
 - with TYPE IV cassette (Sony METALLIC)
 - 25 ~ 17,000 Hz ± 3 dB (NAB)
 - 25 ~ 17,000 Hz ± 3 dB (DIN)
 - 25 ~ 13,000 Hz ± 3 dB (0 VU recording)
 - 20 ~ 19,000 Hz
 - with TYPE III cassette (Sony DUAD)
 - 25 ~ 18,000 Hz ± 3 dB (NAB)
 - 25 ~ 18,000 Hz ± 3 dB (DIN)
 - 20 ~ 19,000 Hz
 - with TYPE II cassette (Sony UCX)
 - 25 ~ 16,000 Hz ± 3 dB (NAB)
 - 20 ~ 18,000 Hz
 - with TYPE I cassette (Sony BHF)
 - 25 ~ 16,000 Hz ± 3 dB (NAB)
 - 25 ~ 16,000 Hz ± 3 dB (DIN)
 - 20 ~ 18,000 Hz

Signal-to-noise ratio

Cassette	Total SN ratio			
	TYPE I (Sony BHF)	TYPE II (Sony UCX)	TYPE III (Sony DUAD)	TYPE IV (Sony METALLIC)
Dolby NR switch				
C-TYPE ON	69 dB	71 dB	74 dB	73 dB
B-TYPE ON	63 dB	65 dB	68 dB	67 dB
OFF	56 dB	58 dB	61 dB	60 dB

— Continued on page 2 —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.



SONY[®]

SERVICE MANUAL

TC-K444

Wow and Flutter:	$\pm 0.06\%$ W. Peak (EIAJ) 0.04% W. RMS
Harmonic Distortion:	315 Hz, 0.5% (Sony DUAD) (EIAJ) Total harmonic distortion 0.8% (Sony DUAD, METALLIC)
Inputs:	Line inputs (pin jacks) $\times 2$ Minimum input level 77.5 mV (47 k Ω)
Outputs:	Line outputs (pin jack) $\times 2$ Output level 0.44 V (47 k Ω) Load impedance over 10 k Ω Headphone output (stereo regular jack) $\times 1$ Output level, variable from 3 mW ~ 0.003 mW (32 Ω)
Power Requirements:	AEP model: 220 V ac, 50/60 Hz UK model: 240 V ac, 50/60 Hz E model: 110, 120, 220, 240 V ac, 50/60 Hz
Power Consumption:	21 watts ac
Dimensions:	Approx. 430 \times 105 \times 285 mm (w/h/d) (17 \times 4 $\frac{1}{4}$ \times 11 $\frac{1}{4}$ inches)
Weight:	Approx. 5.9 kg (13 lbs 11 oz)

0 dB = 0.775 V

Tape transport mechanism type

TCM-110C4

FEATURES

Three-head system

Separate record and playback heads allow optimum gap settings and impedance ratings for distortion-free recording and greatly extended frequency response. Sendust and Ferrite heads take full advantage of metal tapes to provide a wider dynamic range than is possible with conventional tapes. For good tape-to-head contact the heads are mounted in one block and each head is separately adjusted for precise azimuth alignment. The three-head system also enables you to monitor the recorded tape while actually recording.

Newly-developed LA (Laser Amorphous) head

Made of special amorphous magnetics alloy developed by Sony, and their cores are solidly welded by laser. This new highly-durable head provides a wider dynamic range and more extended frequency response, especially in the high-frequency range. The heads are designed to take full advantage of the potential of the metal tapes.

Closed-loop dual-capstan tape drive system

Two pairs of capstans and pinch rollers ensure uniform tape tension and stable tape-to-head contact. As a result, wow and flutter and modulation noise are greatly reduced.

Dolby C-type NR (noise reduction) system

In addition to the conventional B-type Dolby NR system, the TC-K444 employs the newly-developed C-type Dolby NR system which reduces tape noise twice as effectively as the B-type system. The C-type system also incorporates an anti-saturation network to improve the high-frequency dynamic range by 4 dB at 10 kHz.

Bright LED-display peak program meters

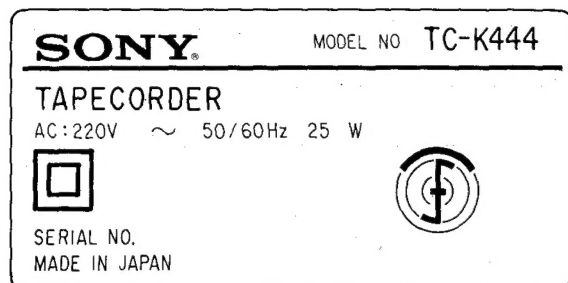
The peak program meters follow the transient peaks of the music and maintain the peak readings for about 4 seconds. This double indication makes it easy to set critical recording levels precisely.

Useful functions

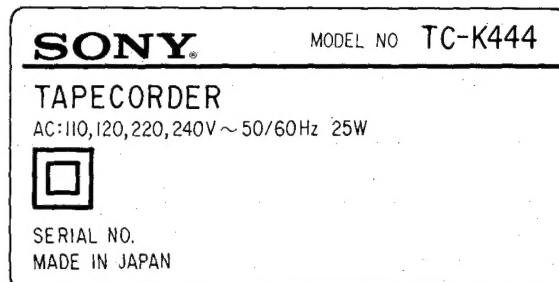
- Record muting function allows you to easily insert a moderately long blank space between selections.
- Auto play permits one step rewind and playback from the beginning of the tape and the memory function allows you to easily locate any desired point on the tape.
- A timer switch is provided to turn the deck on and off any number of times at preset times set on an optional timer.

MODEL IDENTIFICATION

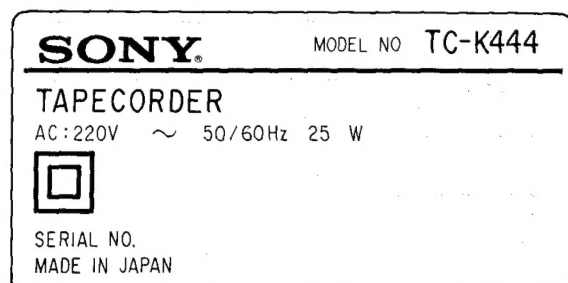
— Specification Label —



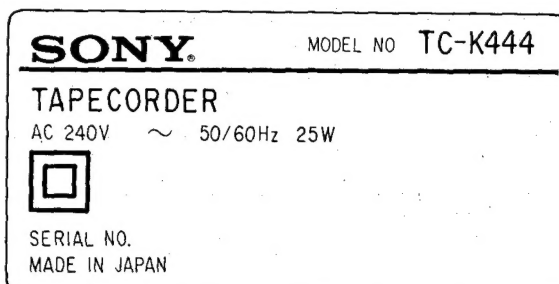
AEP model



E model



G-AEP model



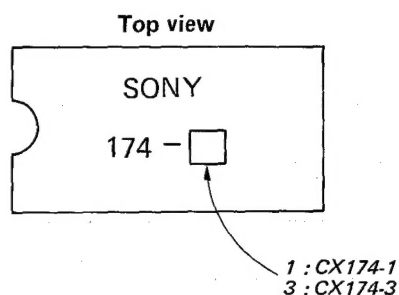
UK model

Caution on DOLBY IC (CX174) Replacement

This set uses eight Dolby ICs (CX174). (IC101, 102, 201, 202, 301, 302, 401, 402)

These ICs are either CX174-1 or CX-174-3.

When replacing these ICs, be sure to use the same ICs as the original one.



MEMO

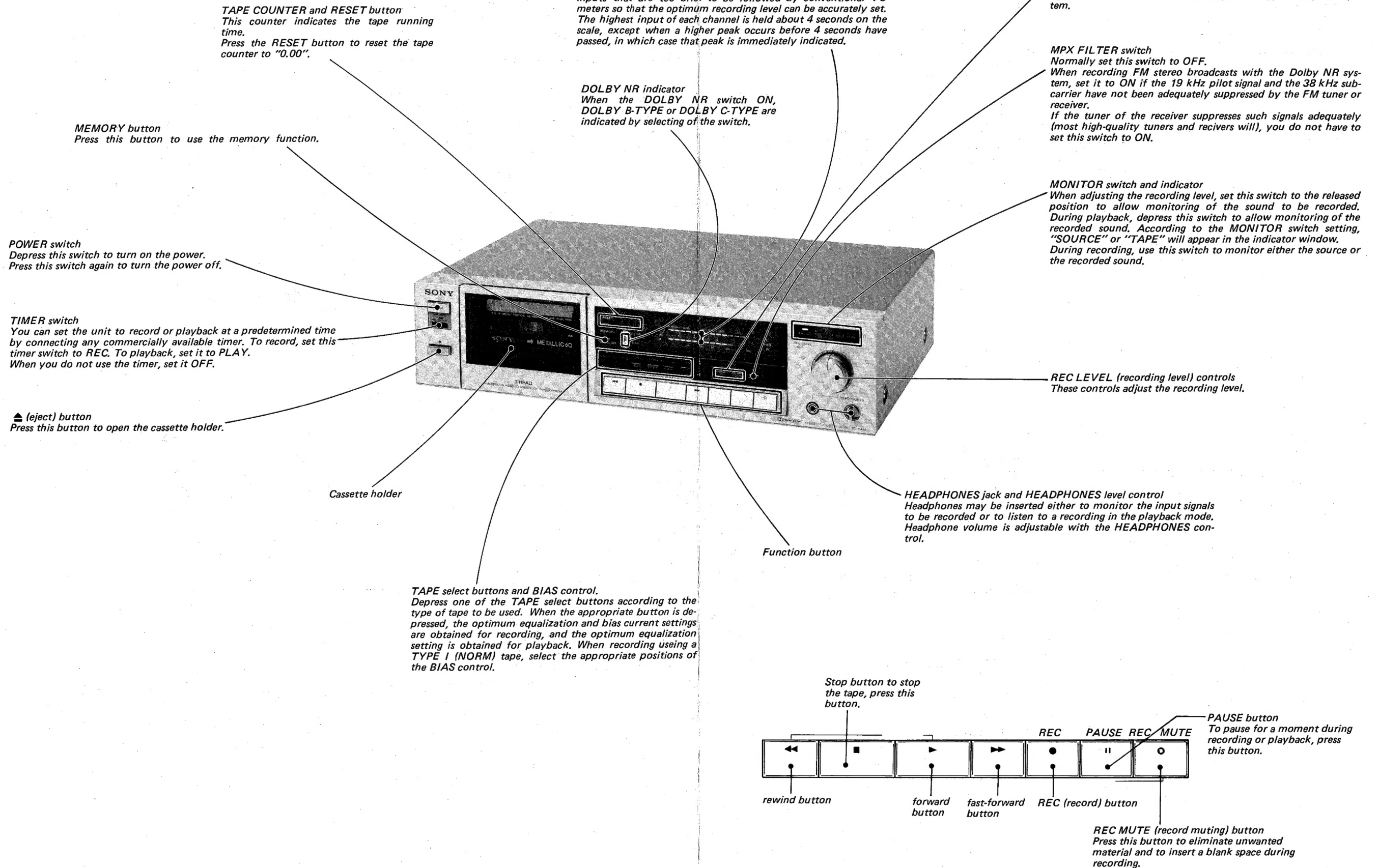
Lined area for memo content.

SECTION 1 OUTLINE

1-1. FUNCTION OUTLINE OF CONTROLS

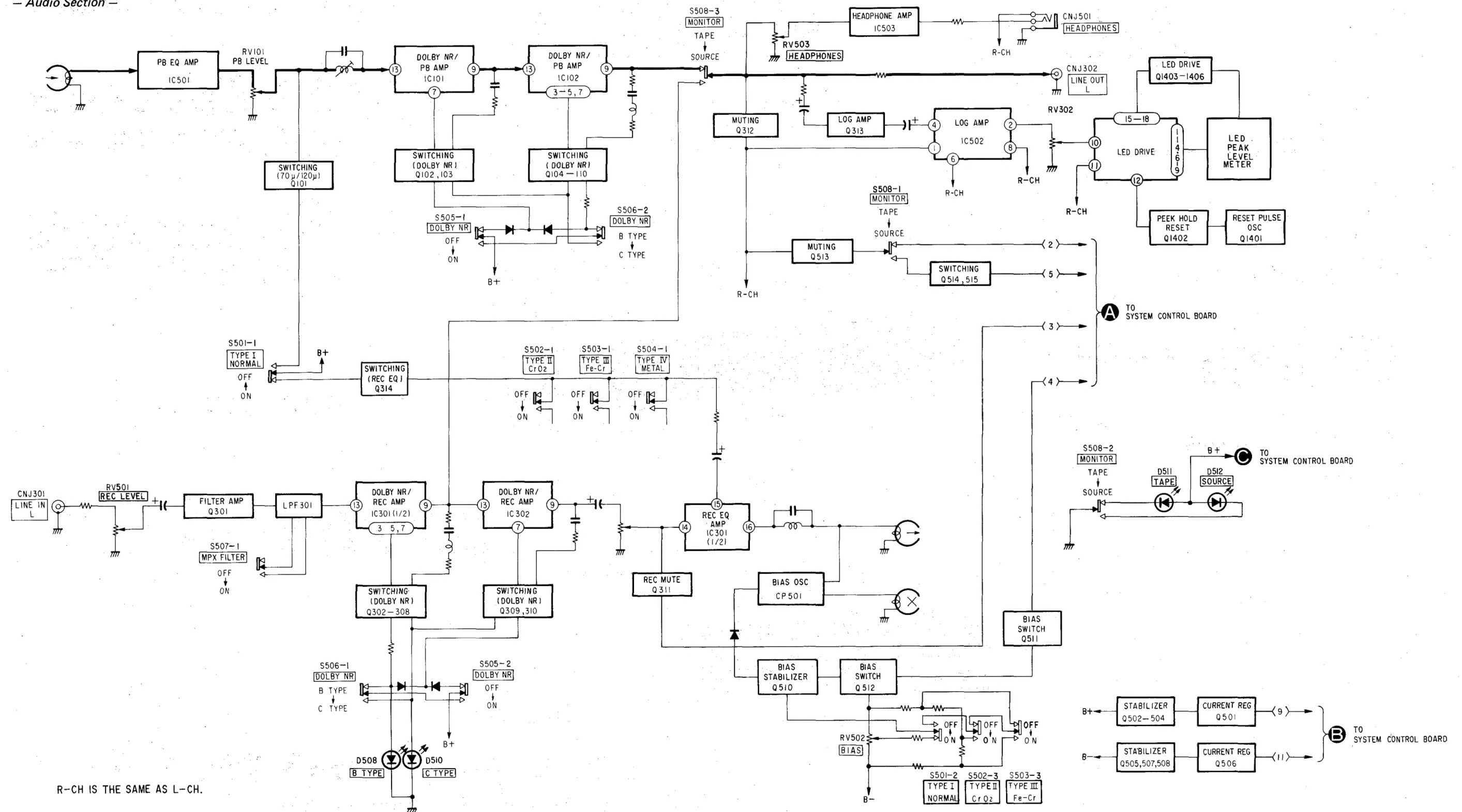
TC-K444

TC-K444



1-2. BLOCK DIAGRAMS

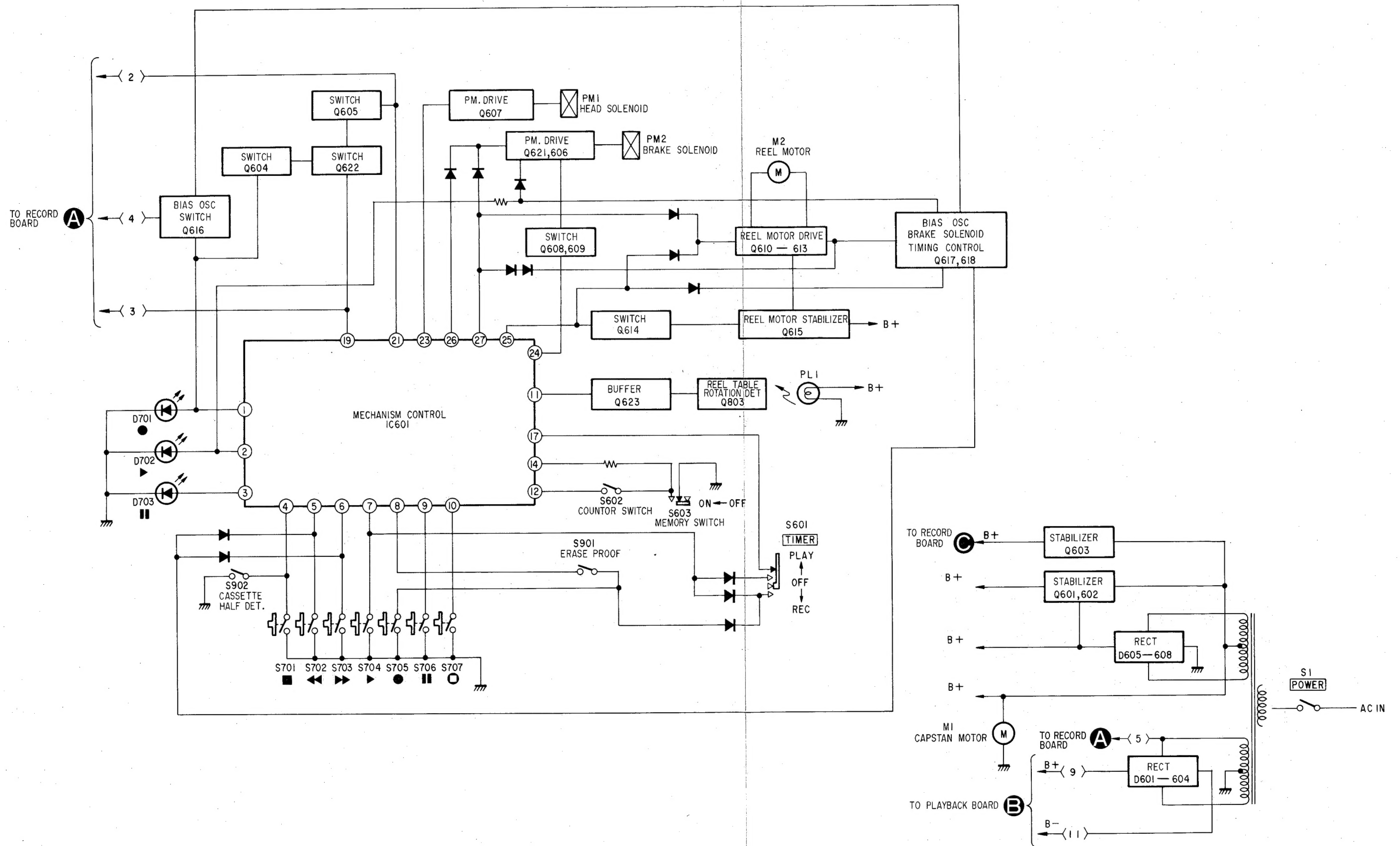
— Audio Section —



TC-K444

TC-K444

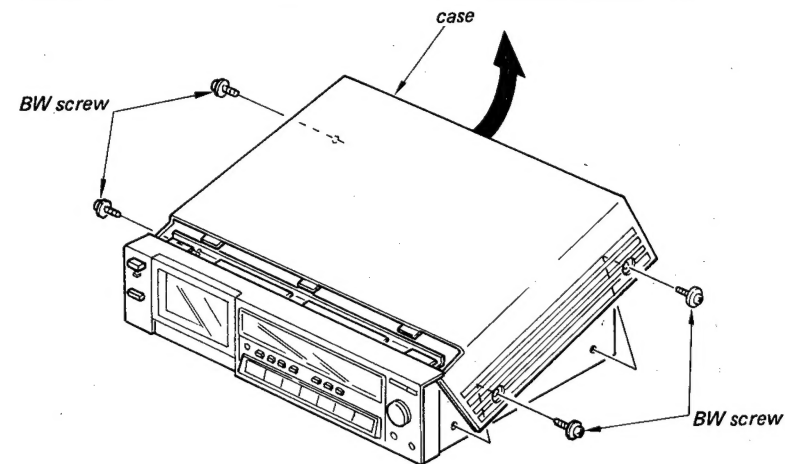
— System Control Section —



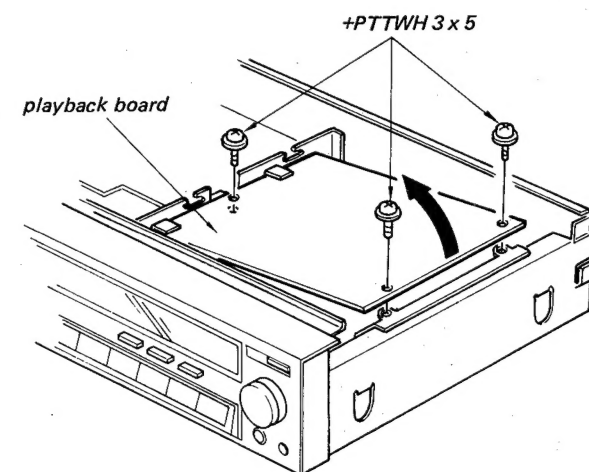
SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

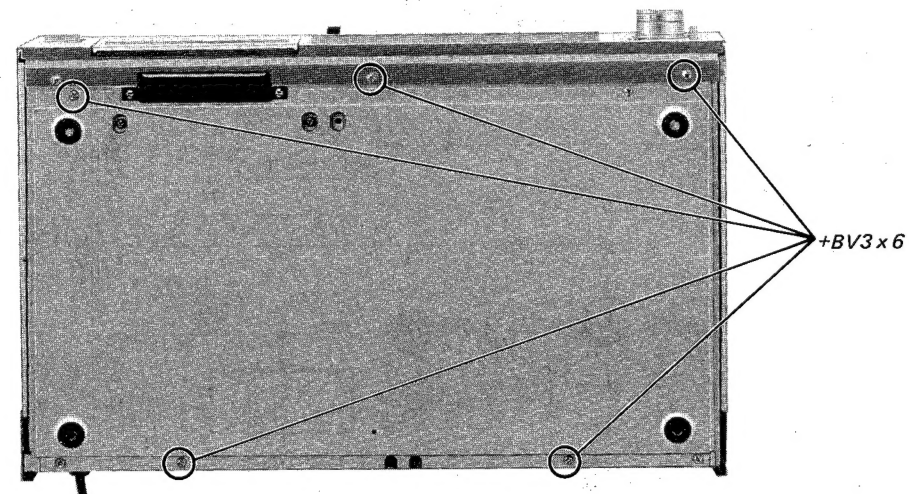
CASE



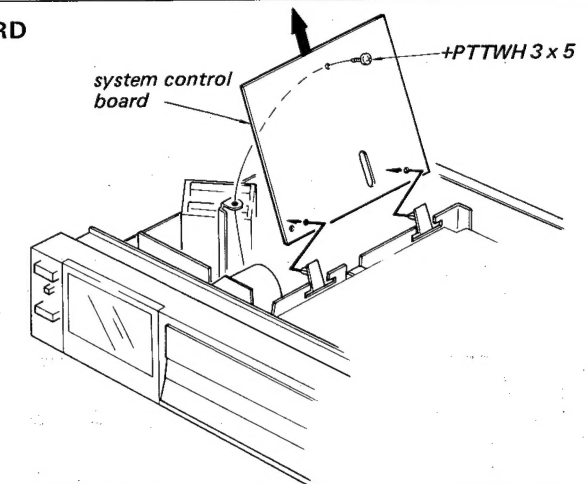
PLAYBACK BOARD



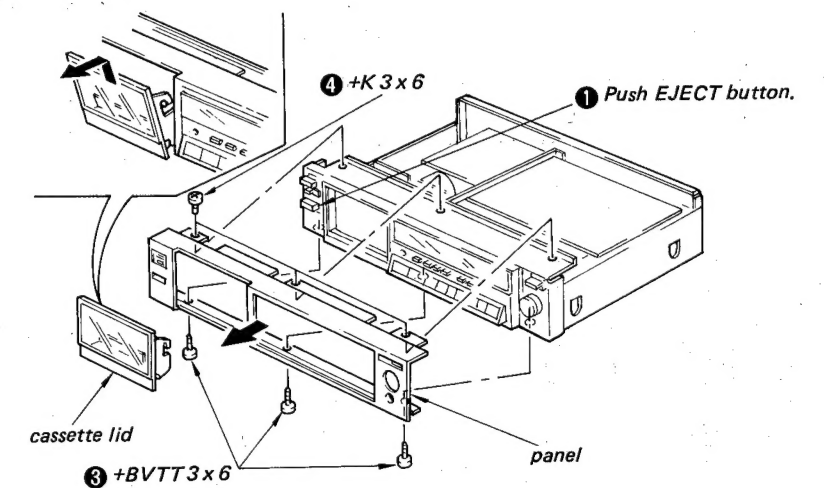
BOTTOM PLATE



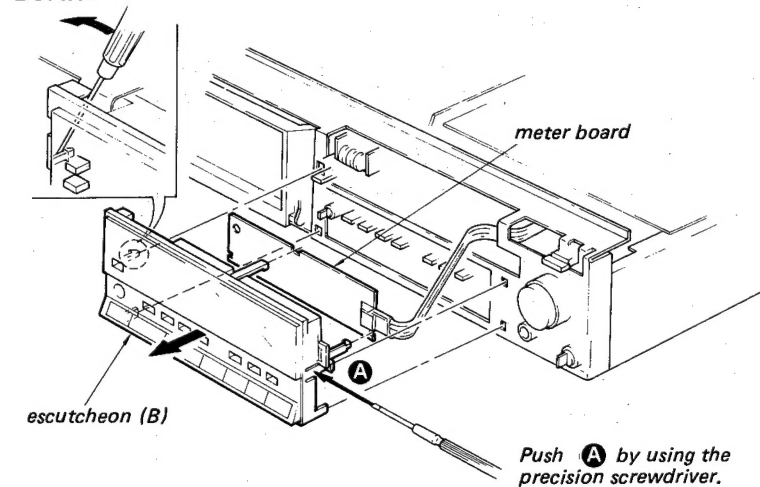
SYSTEM CONTROL BOARD

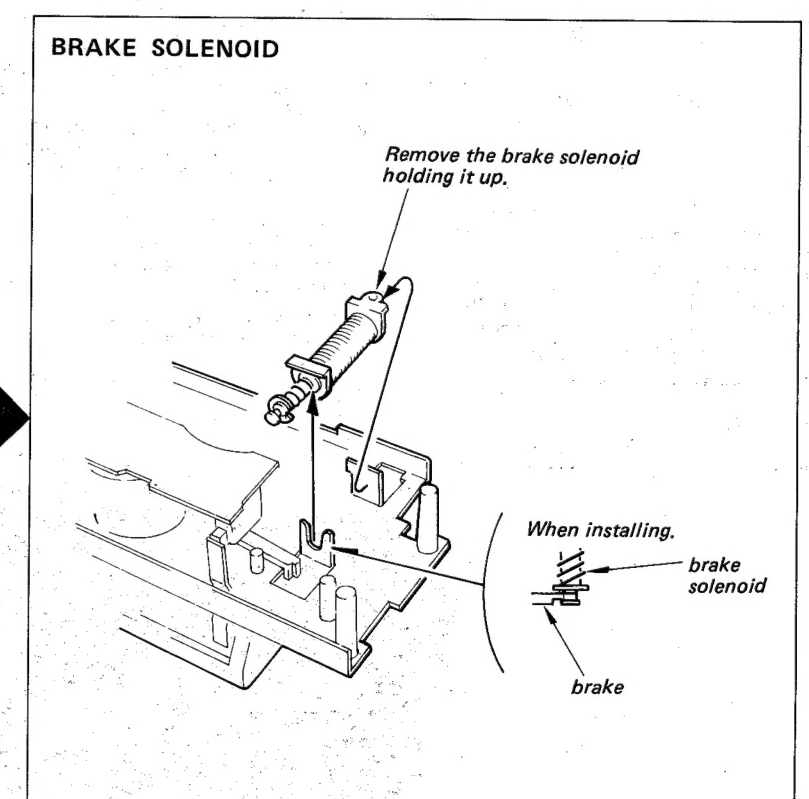
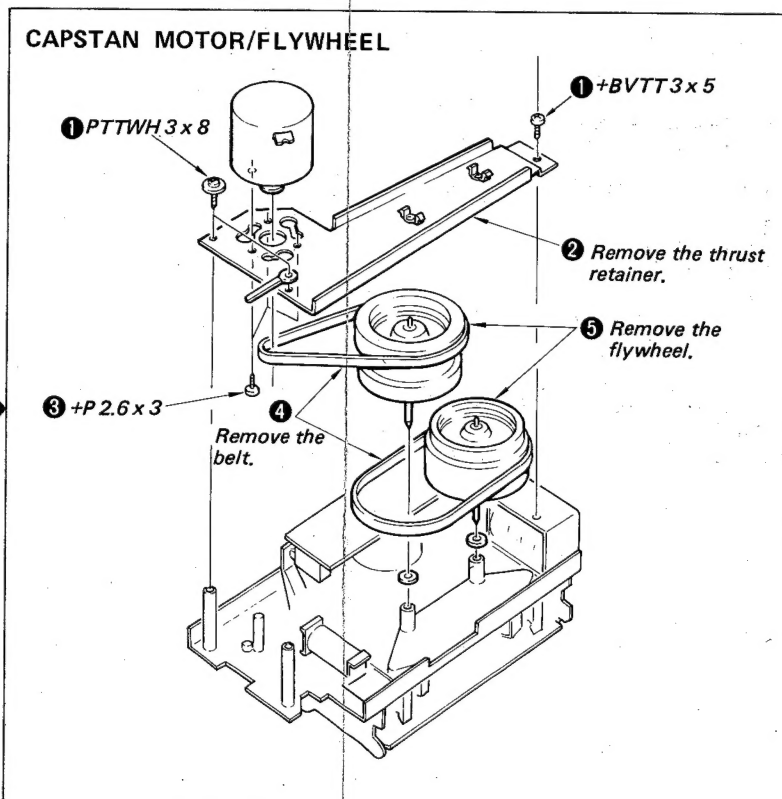
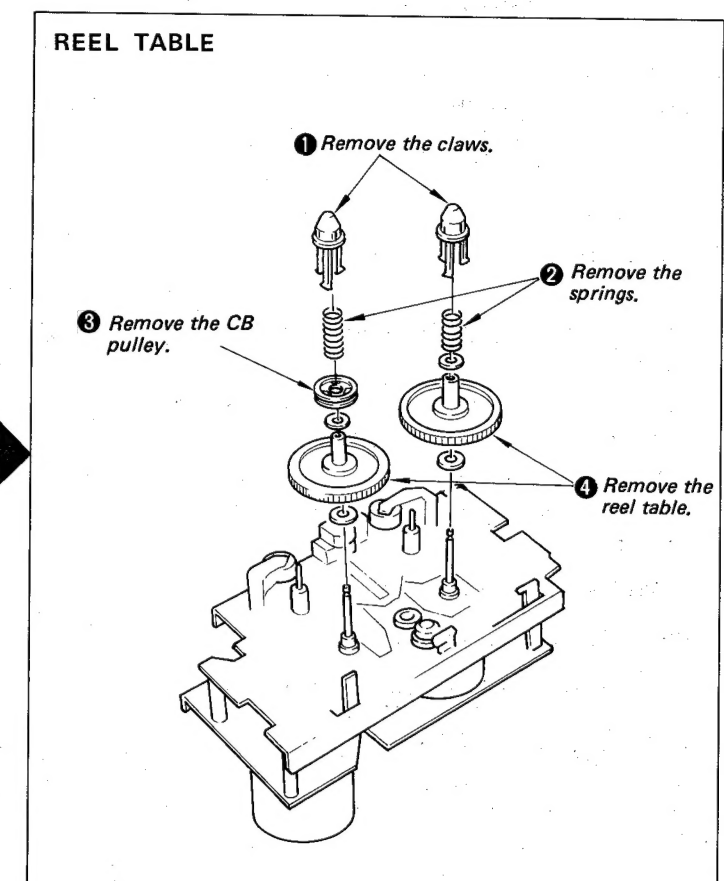
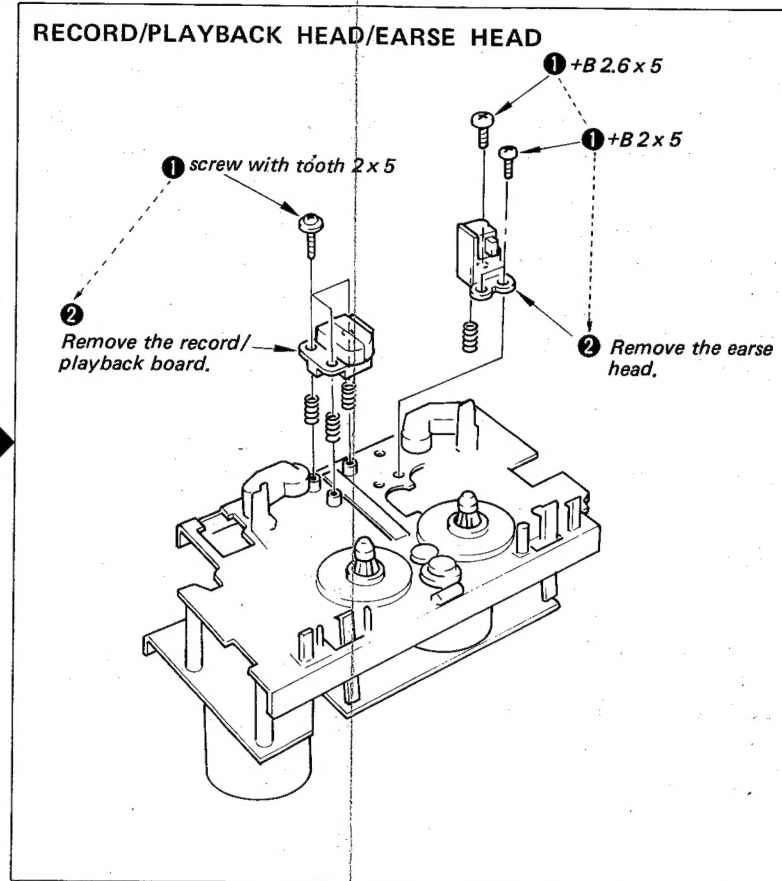
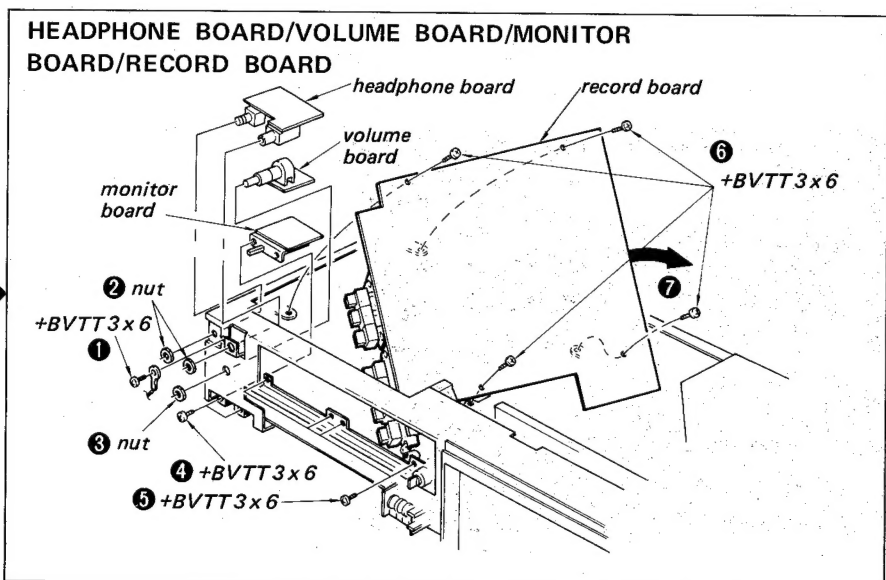
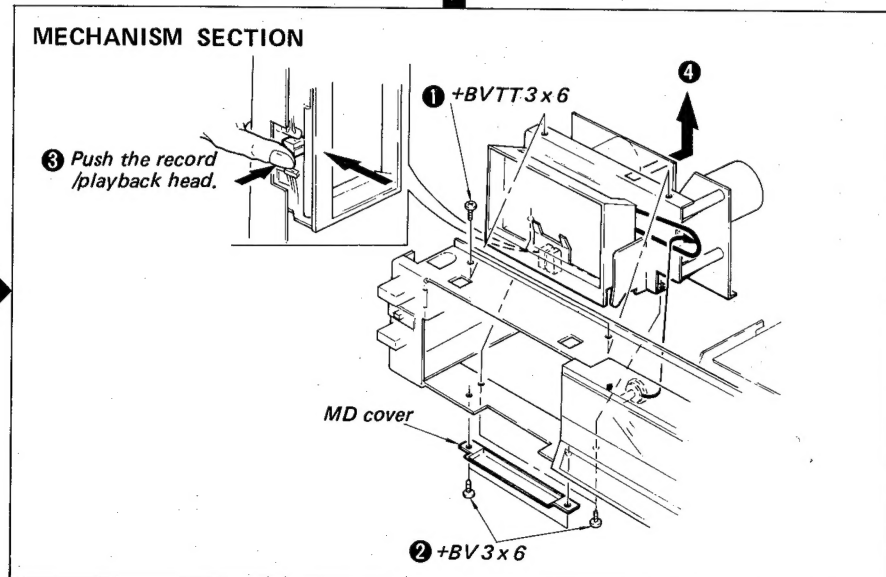
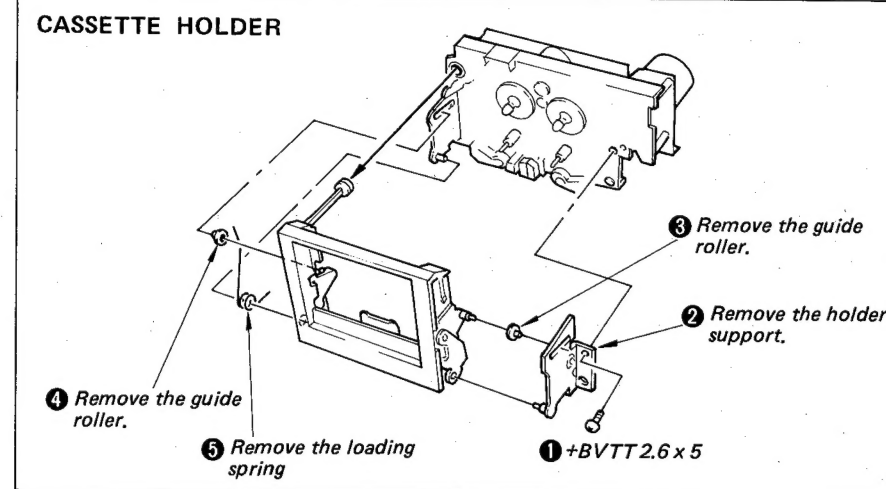


CASSETTE LID/PANEL



ESCUTCHEON (B)/METER BOARD





SECTION 3 ADJUSTMENTS

PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idlers
- Demagnetize the record/playback head with a head demagnetizer.
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.

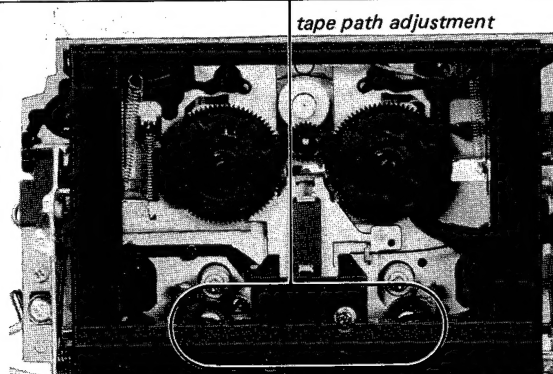
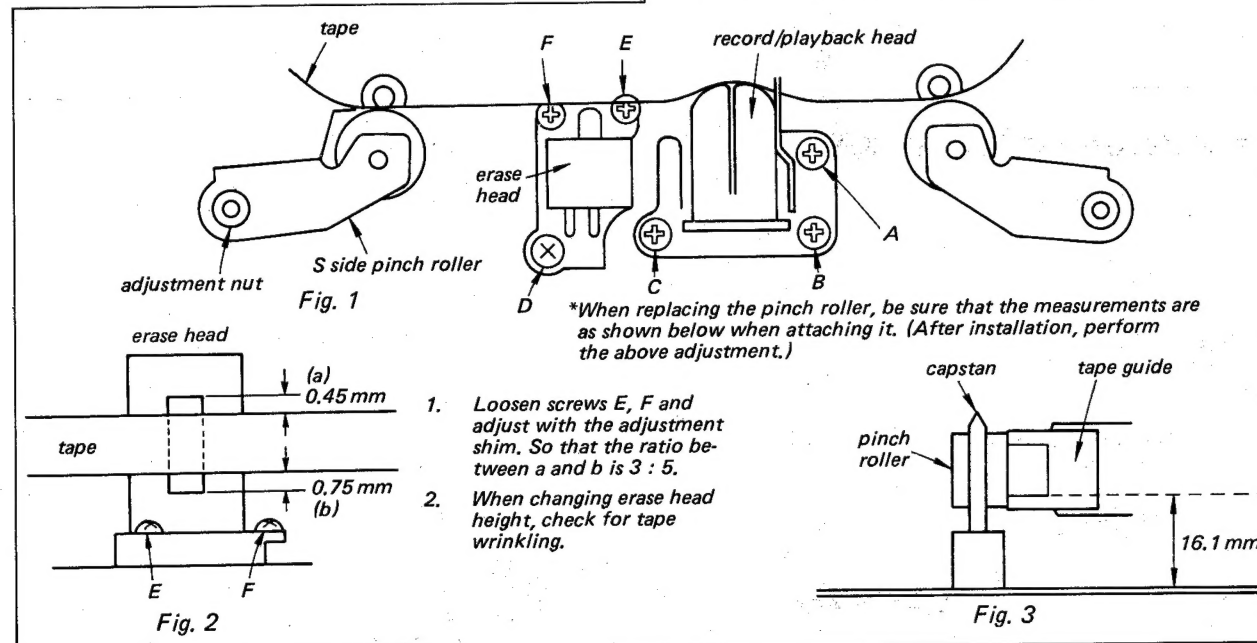
3-1. MECHANICAL ADJUSTMENTS

FF/REW Torque Measurement

Torque	Torque meter	Meter reading
FF REW	CQ-201B	60 - 110 g·cm (0.83 - 1.52 oz·inch)

Tape Path Adjustment

- Insert a mirror cassette (CQ-009C).
- Set for forward mode and confirm that there is no tape curl at the tape guides and recording head.
- If there is curl, turn the adjust nut and raise and lower the supply side pinch roller (with tape guide attached) to adjust.
- If step 3 does not get rid of the curl, adjust further by turning adjustment screws A, B, C less than 1/2 turn in the same direction at the same angle.
- Confirm that the erase head height is as shown in Figure 2.
- Check tape wrinkling (zigzag).
Tighten adjust screw D if the tape is wrinkling up. (clockwise)
Loosen screw D if the tape is wrinkling downward. (counterclockwise)
Repeat step 5 after adjusting screw D as necessary, within 1/2 turn.
- Lock the screw with locking compound.



Head Base Position Adjustment

Perform the following adjustment when replacing the head base solenoid.

Perform with the old head base solenoid still in place.

- Press the head base solenoid core with the finger until the head base stops moving.
- Draw a line as shown in Figure 2. Replace with the new head base solenoid.
- Loosen the mounting screw, match with the line drawn in step 2, and tighten the screw.
- Lock the screw after adjustment.

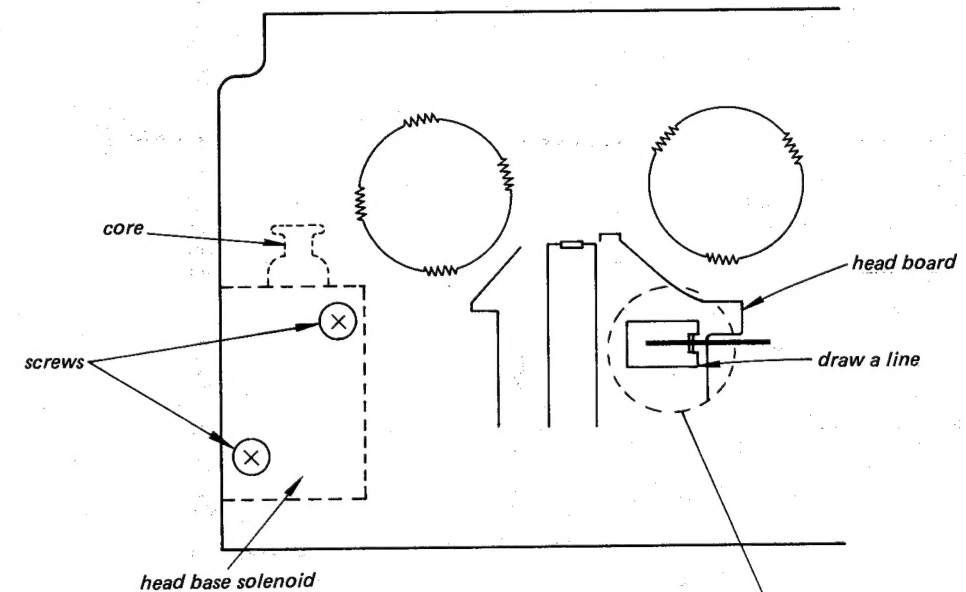


Fig. 1

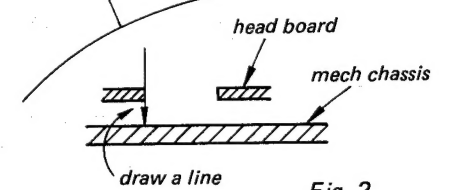
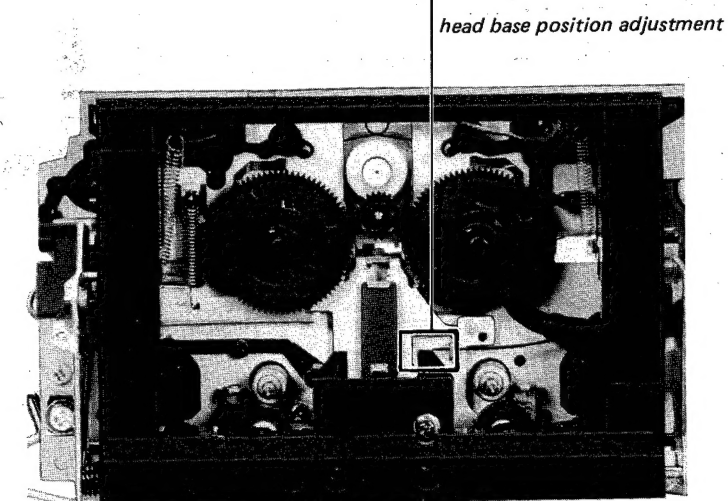


Fig. 2

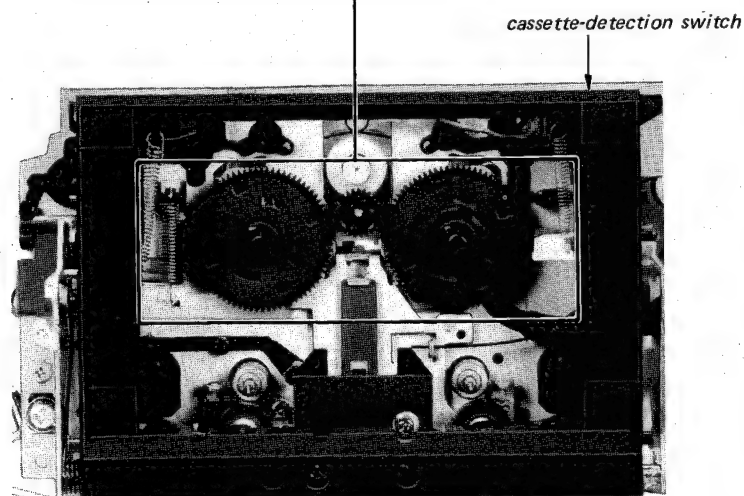
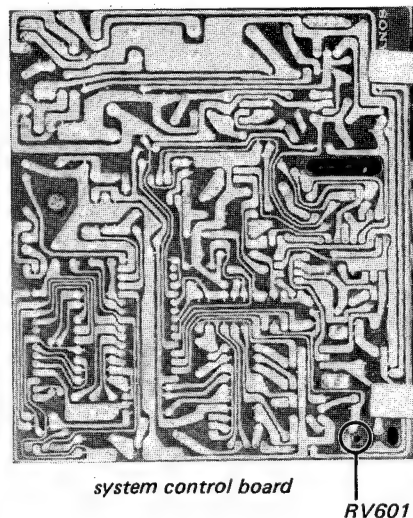
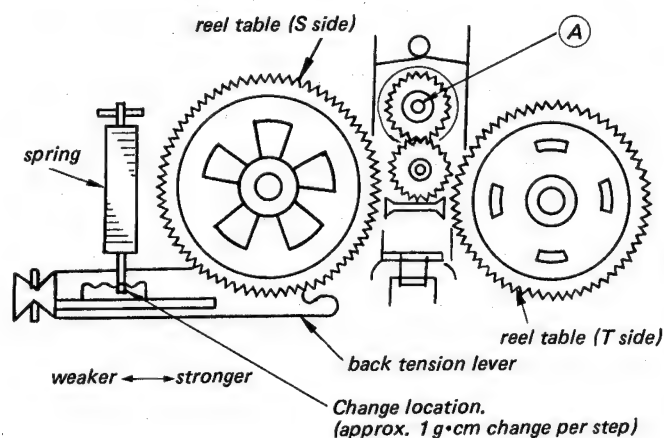


Forward Torque Adjustment

1. Remove the ornamental plate.
2. Press the cassette detection switch and T side reel table simultaneously by hand and then press the forward button. In this state, hold the T reel table so that it does not rotate.
3. Now adjust RV601 to the position where (A) begins to rotate.
(It will shut off immediately, so press the forward button to repeat.)
4. Next insert CQ-102C, and measure forward torque and back tension torque. If back tension torque is not within the specifications, change the location where the spring is hooked.

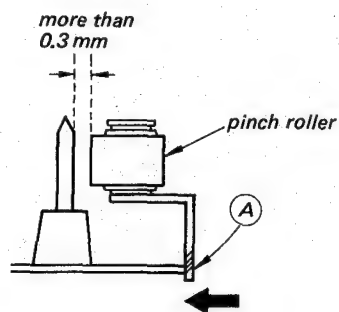
Specifications:

forward torque: 30 – 50 g·cm
back tension torque: 8.5 – 10.5 g·cm



Pinch Roller Clearance Adjustment

1. Confirm that the clearance between the pinch roller and capstan is more than 0.3 mm in pause mode.
2. If it is less than 0.3 mm, bend (A) in the direction of the arrow.

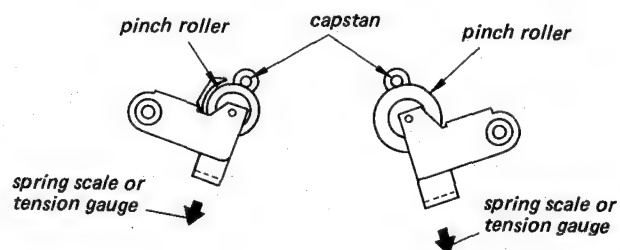


Pinch Roller Pressure Measurement

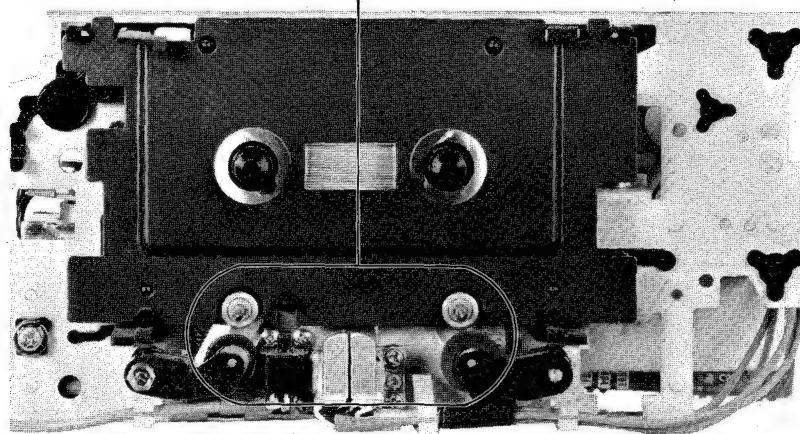
1. Confirm that the pinch roller is parallel to the capstan.
2. Set in forward, move the pinch roller away from the capstan, then back toward it, and measure the value at the point where the pinch roller begins to rotate.

T side 270 – 330 g

S side 180 – 280 g



pinch roller clearance adjustment



3-2. ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in this service manual. The adjustments should be performed for both L-CH and R-CH.

- Set the TAPE switches according to the tape as follows.

Tape	TAPE switch
CS-15	TYPE I
CS-25	TYPE II
CS-30	TYPE III
CS-40	TYPE IV

- Switches and controls should be set as follows unless otherwise specified.

DOLBY NR switch: OFF
 TAPE switch: TYPE I
 TIMER switch: OFF

- Standard Record:

Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

Standard Input Level

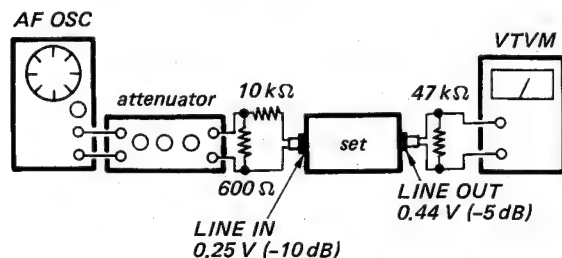
	LINE IN
source impedance	10 k Ω
input level	0.25 V (-10 dB)

Standard Output Level

	HEADPHONES	LINE OUT
load impedance	8 Ω	47 k Ω
output level	77 mV (-20 dB)	0.44 V (-5 dB)

MONITOR switch: TAPE

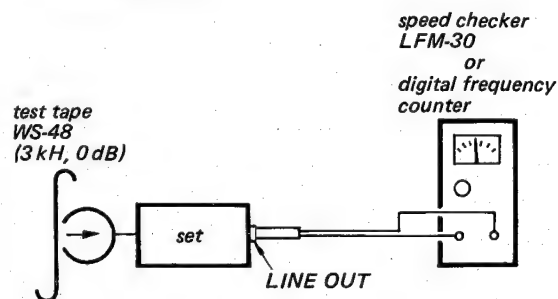
record and playback mode



Tape Speed adjustment

Procedure:

playback mode



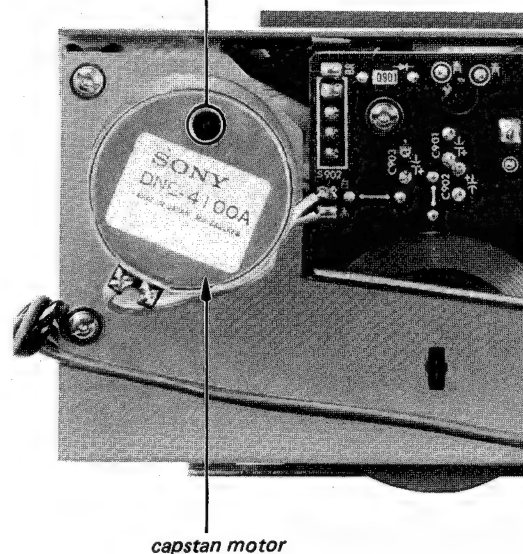
Specification:

Speed checker	Digital frequency counter
-0.17 to +0.17%	2.995 - 3.005 Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30 Hz).

Adjustment Location:

Adjust the speed by using screwdriver. When turning the screw clockwise, speed is faster. capstan motor

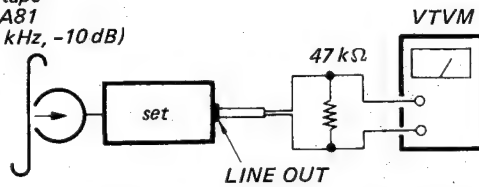


Playback Head Azimuth Adjustment

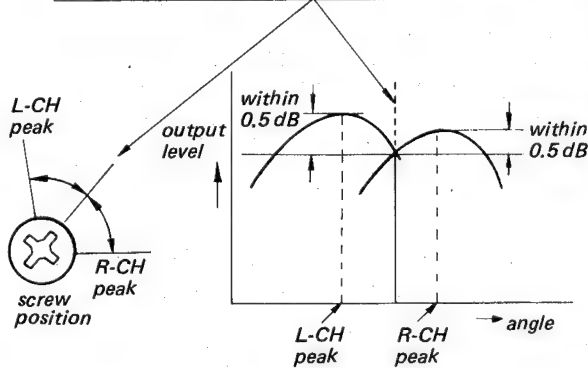
Procedure:

playback mode

test tape
P-4-A81
(6.3 kHz, -10 dB)

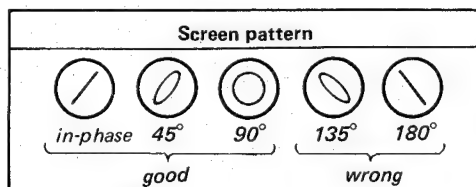
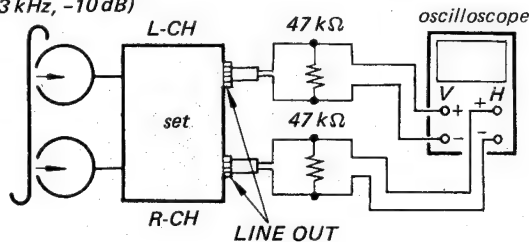


1. Turn the adjustment screw for the maximum output level. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.

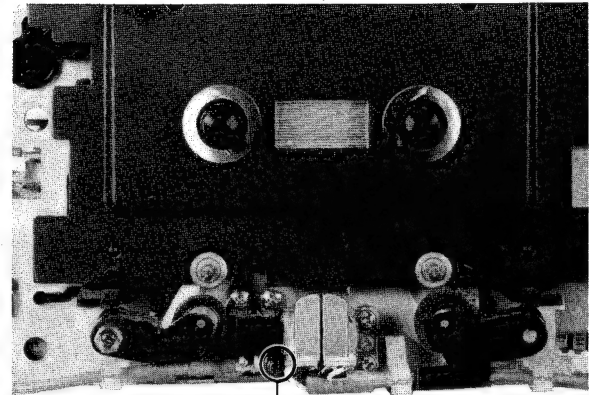


2. Phase Check
playback mode

test tape
P-4-A81
(6.3 kHz, -10 dB)



Adjustment Location:



adjustment screw

Adjust the screw so that L-CH and R-CH are in phase.

Specification:

Phase difference between L-CH and R-CH : less than 90°
Level difference between L-CH and R-CH : less than 1 dB

Record Head Azimuth Adjustment (Record head azimuth adjustment should be made later than playback head azimuth adjustment.)

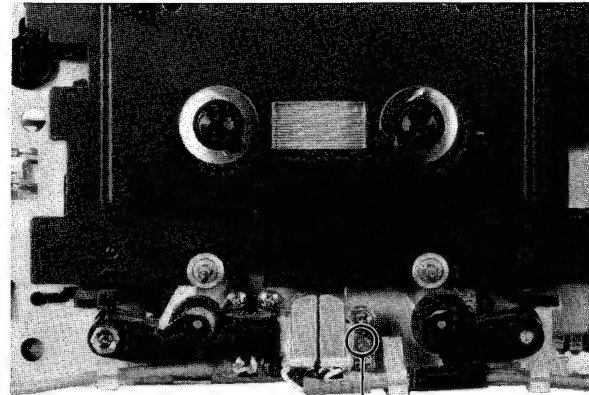
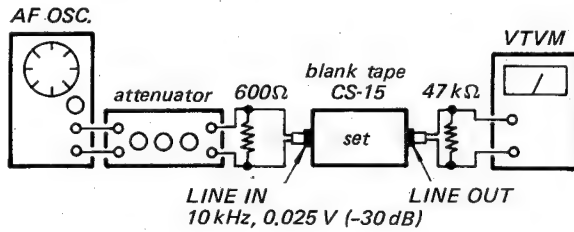
Setting:

MONITOR switch: TAPE
REC LEVEL control: standard record
TAPE: TYPE I (See page 19)

Adjustment Location:

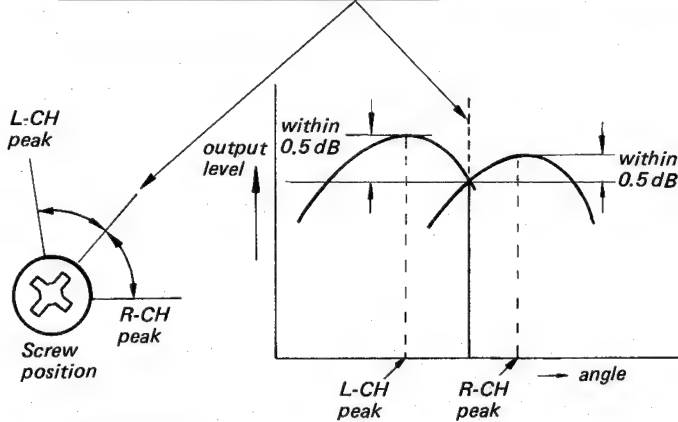
Procedure:

record and playback mode

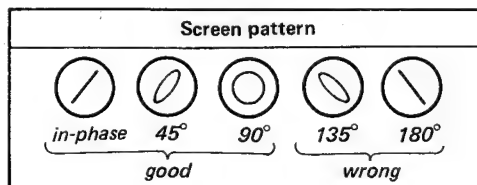
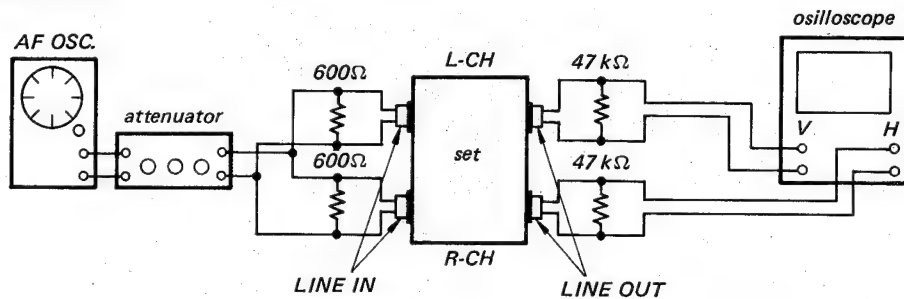


adjustment screw

1. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.



2. Phase Check



Adjust the screw so that L-CH and R-CH are in phase.

Specification:

Phase difference between L-CH and R-CH:
less than 90°

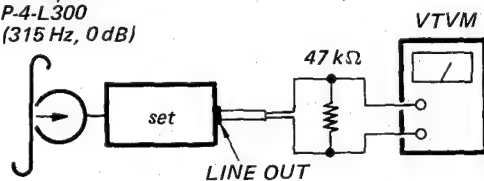
Level difference between L-CH and R-CH:
less than 1 dB

Playback Level Adjustment

Procedure:

playback mode

test tape
P-4-L300
(315 Hz, 0 dB)



Specification:

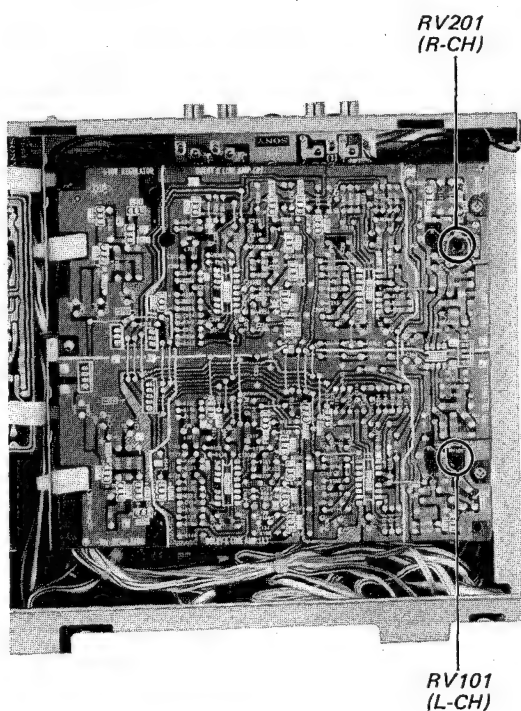
LINE OUT level: 0.44 ~ 0.49 V
(-4.9 ~ -3.9 dB)

Level difference between channels:
less than 0.5 dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location:

— playback board —



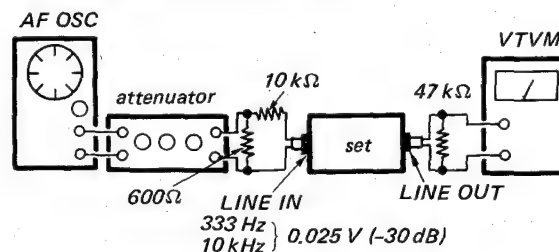
Record Bias Adjustment

Setting:

MONITOR switch: TAPE
REC LEVEL control: standard record
(See page 19)
test tape: CS-15 (blank tape)

Procedure:

record and playback mode



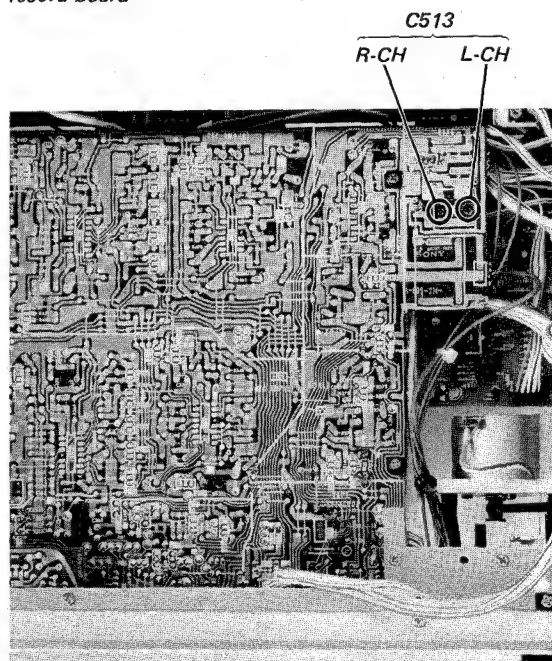
Adjust C513 (L-CH), (R-CH) so that the LINE OUT level of 333 Hz signal is 0 dB relative to that of 10 kHz.

Specification:

Level difference of
10 kHz against 333 Hz: 0 dB ± 0.5 dB

Adjustment Location:

— record board —



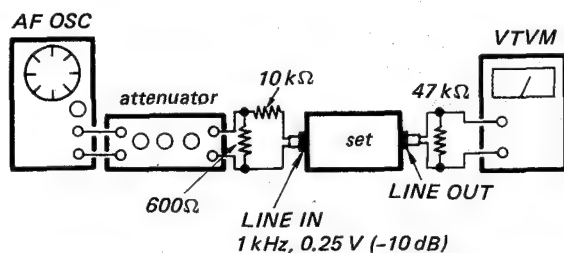
Record Level Adjustment

Setting:

MONITOR switch: TAPE
REC LEVEL control: standard record
(See page 19)

Procedure:

record and playback mode

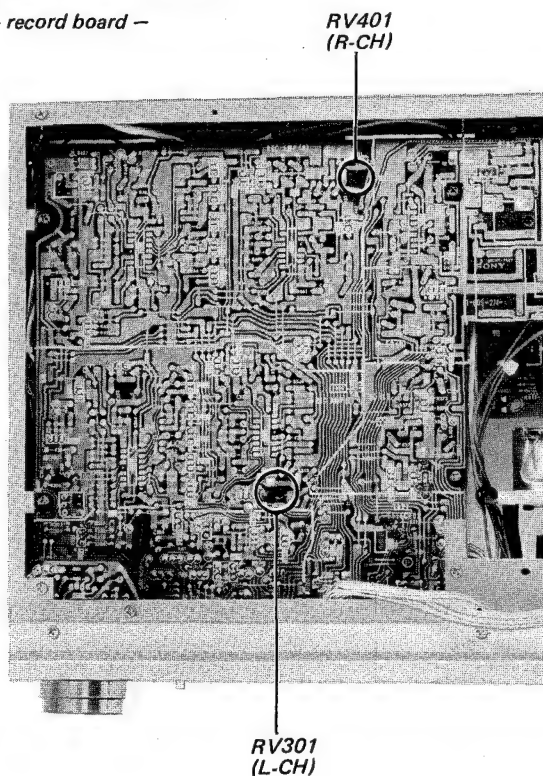


Adjust RV301 (L-CH), RV401 (R-CH) so that the LINE OUT level is as shown.

test tape	LINE OUT level
CS-15	-5 dB \pm 0.5 dB
CS-25	-5 dB \pm 1.5 dB
CS-30	-5 dB \pm 1.5 dB
CS-40	-5 dB $\begin{smallmatrix} +2 \\ -1 \end{smallmatrix}$ dB

Adjustment Location:

— record board —



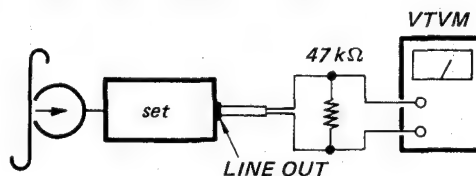
Bias Trap Adjustment

Setting:

MONITOR switch: TAPE
TAPE: TYPE IV
DOLBY: OFF
test tape: CS-40 (blank tape)

Procedure:

record and playback mode



1. In record and forward mode, adjust L101 (L-CH), L201 (R-CH) so that the LINE OUT level is minimum on the VTVM.

Specification:

Less than -45 dB

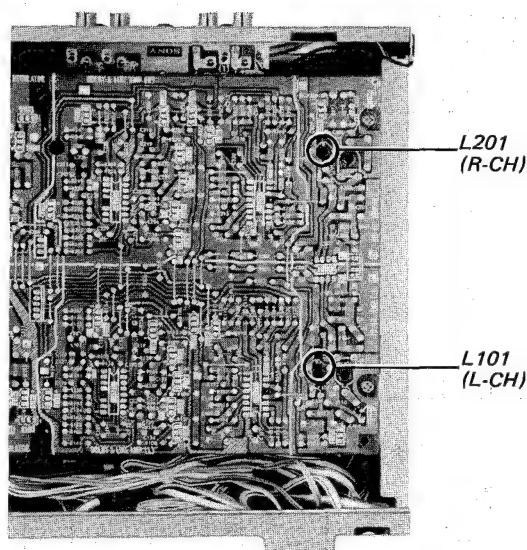
2. Check the LINE OUT level when setting the MONITOR switch to SOURCE.

Specification:

Less than -65 dB

Adjustment Location:

— playback board —

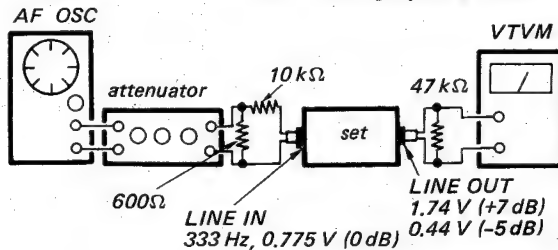


Level Meter Calibration

Setting:

MONITOR switch: TAPE
test tape: CS-15 (blank tape)
record and playback mode

Procedure:



1. Set the REC LEVEL control so that the LINE OUT level is +7 dB.
2. Adjust RV302 (L-CH) and RV402 (R-CH) so that the LEDs including +8 dB (right-most element) light up.
3. Set the REC LEVEL control so that the LINE OUT level is -5 dB.
Make sure that LED meter indicates -4 dB (0 VU) in this time.

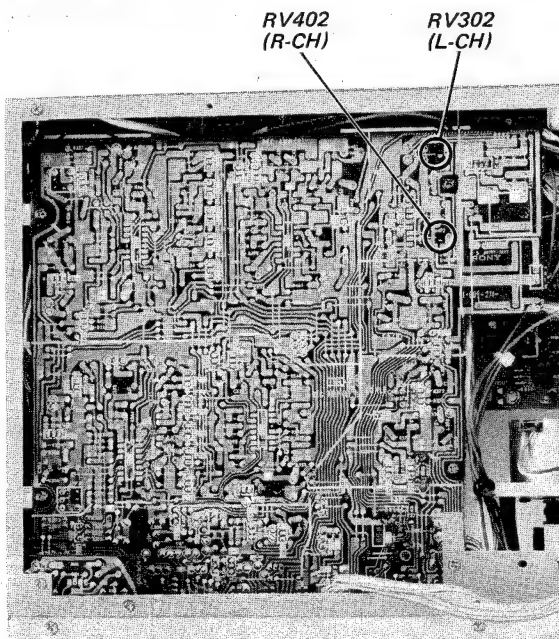
Note: Slide the REC LEVEL control rightward slowly. (Be careful to peakhold indication.)

Specification:

- +8 dB LED meter lights up while LINE OUT level is +7 dB ± 1 dB.
- -4 dB LED meter lights up while LINE OUT level is -5 dB ± 1 dB.

Adjustment Location:

— record board —

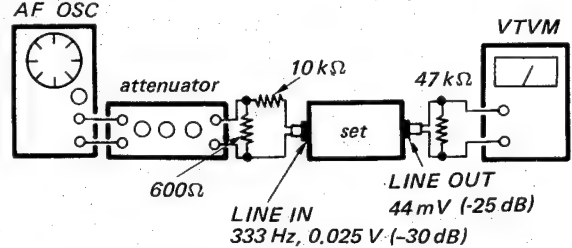


DOLBY C Level Adjustment

Setting:

REC LEVEL control: standard record (See page 19)
MONITOR switch: TAPE
test tape: CS-15 (blank tape)
record and playback mode

Procedure:



1. Set DOLBY switch to DOLBY C.
Adjust for the specification.

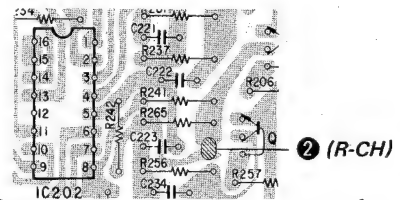
Specification:

- LINE OUT level: 55 mV \sim 35 mV
- Level difference between L-CH and R-CH: (-23 dB \sim -27 dB)
less than 2 dB

Adjustment Location:

— playback board —

If LINE OUT level is higher than the specification, unsolder the portion marked by ① (L-CH), ② (R-CH).



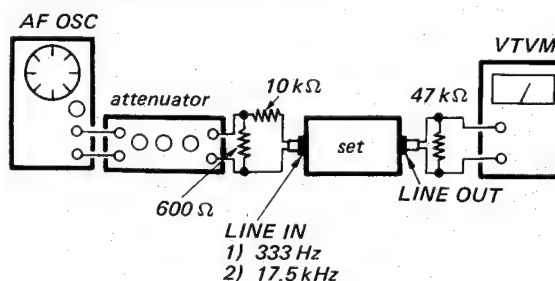
TYPE IV Record Equalizer Adjustment

Setting:

MONITOR switch:	TAPE
REC LEVEL control:	standard record (See page 19)
DOLBY switch:	OFF
TAPE:	TYPE IV
test tape:	CS-40 (blank tape)

Procedure:

record and playback mode



1. Confirm that the LINE OUT level difference of 17.5 kHz meets the specification relative to that of 333 Hz.

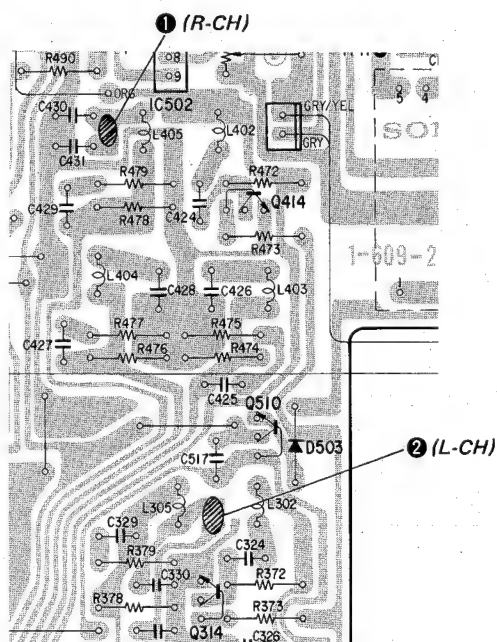
Specification:

Level difference of
17.5 kHz against 333 Hz: 0 dB $\begin{matrix} +3 \\ -5 \end{matrix}$ dB

If LINE OUT level of 17.5 kHz is too lower than the specification, solder the portion marked by ① (R-CH), ② (L-CH).

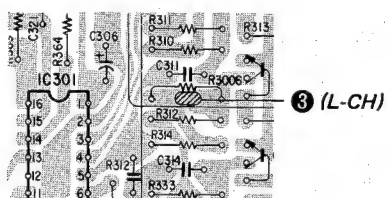
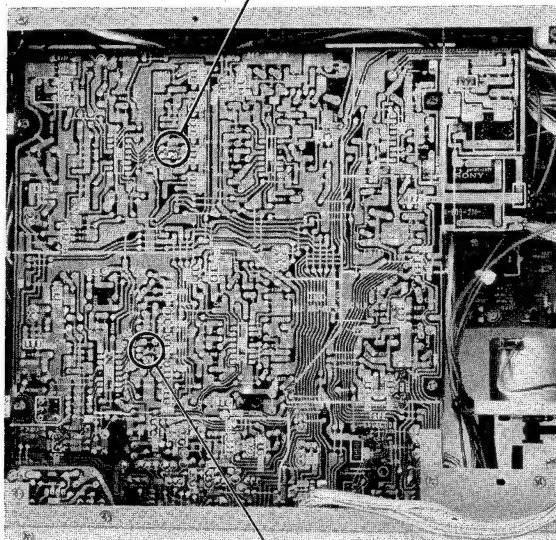
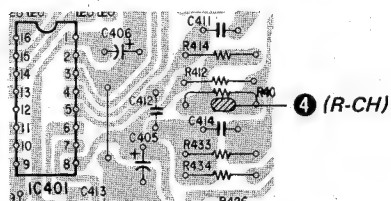
Adjustment Location:

— record board —

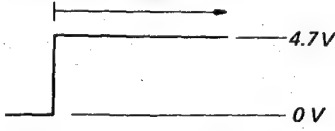
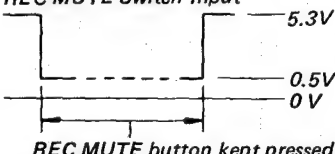
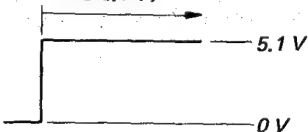
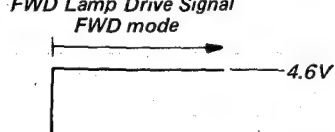
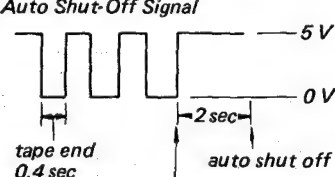
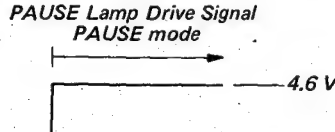
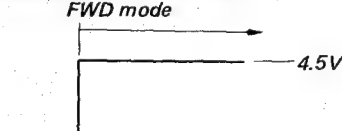
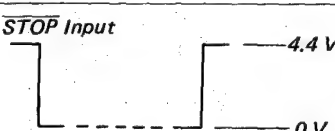
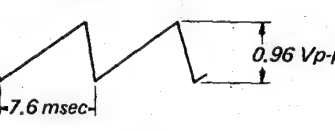
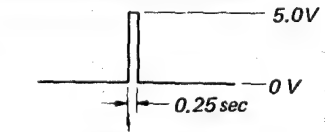
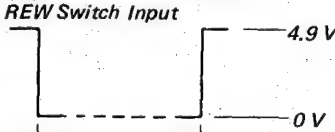
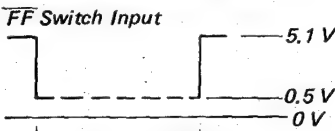
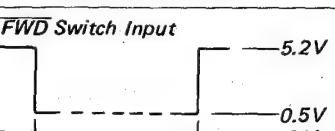
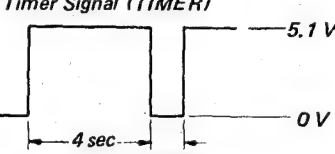
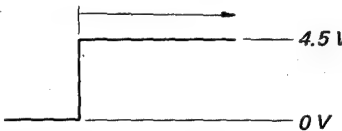
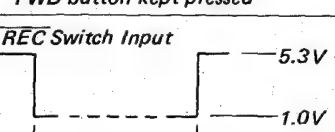
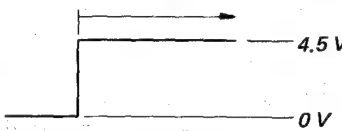
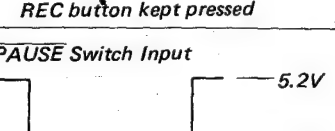
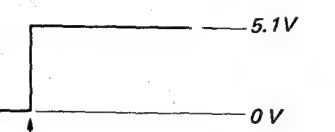
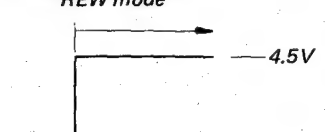


— record board —

If LINE OUT level is lower than the specification, unsolder the portion marked by ③ (L-CH), ④ (R-CH).



IC601's Terminal Name, Waveform and/or Voltages

Pin No.	Waveform and/or Voltages	Pin No.	Waveform and/or Voltages	Pin No.	Waveform and/or Voltages
①	<i>REC Lamp Drive Signal</i> <i>REC mode</i>  4.7V 0V	⑩	<i>REC MUTE Switch Input</i>  5.3V 0.5V 0V <i>REC MUTE button kept pressed</i>	⑪	<i>Line-Muting Signal</i> <i>FWD mode or REC mode</i> <i>(only record switch ON DC 5.1 V)</i>  5.1V 0V
②	<i>FWD Lamp Drive Signal</i> <i>FWD mode</i>  4.6V 0V	⑪	<i>Auto Shut-Off Signal</i>  5V 0V tape end 0.4 sec 2 sec auto shut off	⑫	(not used in this set)
③	<i>PAUSE Lamp Drive Signal</i> <i>PAUSE mode</i>  4.6V 0V	⑫	<i>Tape Counter Input DC 5.2V</i>	⑬	<i>Head-Solenoid Drive Signal</i> <i>FWD mode</i>  4.5V 0V
④	<i>STOP Input</i>  4.4V 0V <i>stop button kept pressed</i>	⑬	<i>Clock Signal</i>  0.96 Vp-p 7.6 msec	⑭	<i>AMS Solenoid Drive Signal</i>  5.0V 0V 0.25 sec <i>FWD button ON</i>
⑤	<i>REW Switch Input</i>  4.9V 0V <i>REW button kept pressed</i>	⑭	<i>GND 0V</i>	⑮	(not used in this set)
⑥	<i>FF Switch Input</i>  5.1V 0.5V 0V <i>FF button kept pressed</i>	⑮	(not used in this set)	⑯	(not used in this set)
⑦	<i>FWD Switch Input</i>  5.2V 0.5V 0V <i>FWD button kept pressed</i>	⑯	<i>Timer Signal (TIMER)</i>  5.1V 0V 4 sec 0.5 sec <i>POWER Switch ON (regardless of position of TIMER switch)</i>	⑰	<i>Reel-Motor Drive Signal in Forward Mode</i> <i>FWD mode</i>  4.5V 0V
⑧	<i>REC Switch Input</i>  5.3V 1.0V 0V <i>REC button kept pressed</i>	⑰	<i>Reset Signal (RESET) DC 4.4V</i>	⑱	<i>Reel-Motor Drive Signal in Fast-Forward Mode</i> <i>FF mode</i>  4.5V 0V
⑨	<i>PAUSE Switch Input</i>  5.2V 0.3V 0V <i>PAUSE button kept pressed</i>	⑱	<i>Record-Muting Signal</i>  5.1V 0V <i>REC MUTE switch ON in record mode</i>	⑲	<i>Reel-Motor Drive Signal in Rewind Mode</i> <i>REW mode</i>  4.5V 0V
		⑳	(not used in this set)	㉑	<i>B + Supply Voltage DC 6V</i>

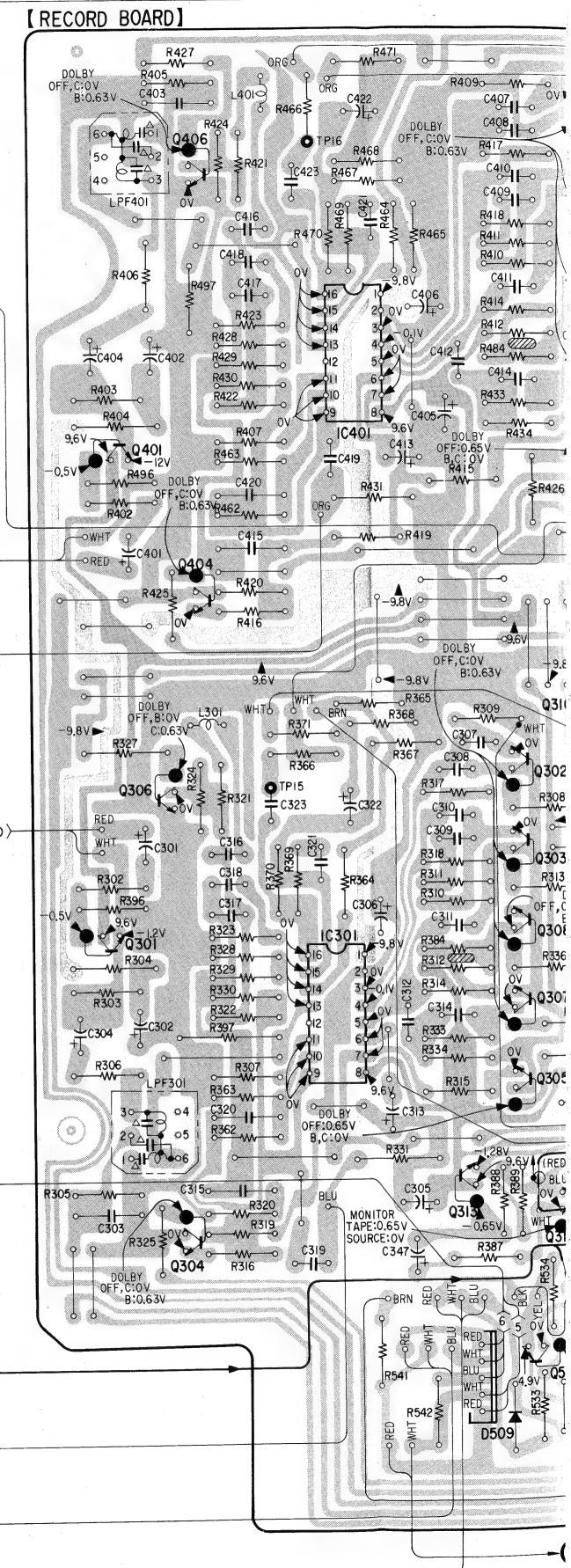
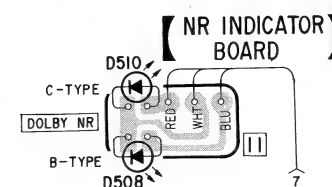
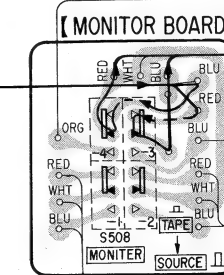
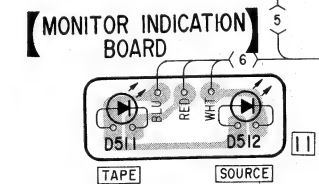
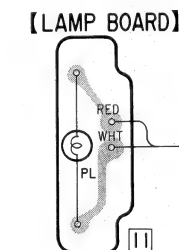
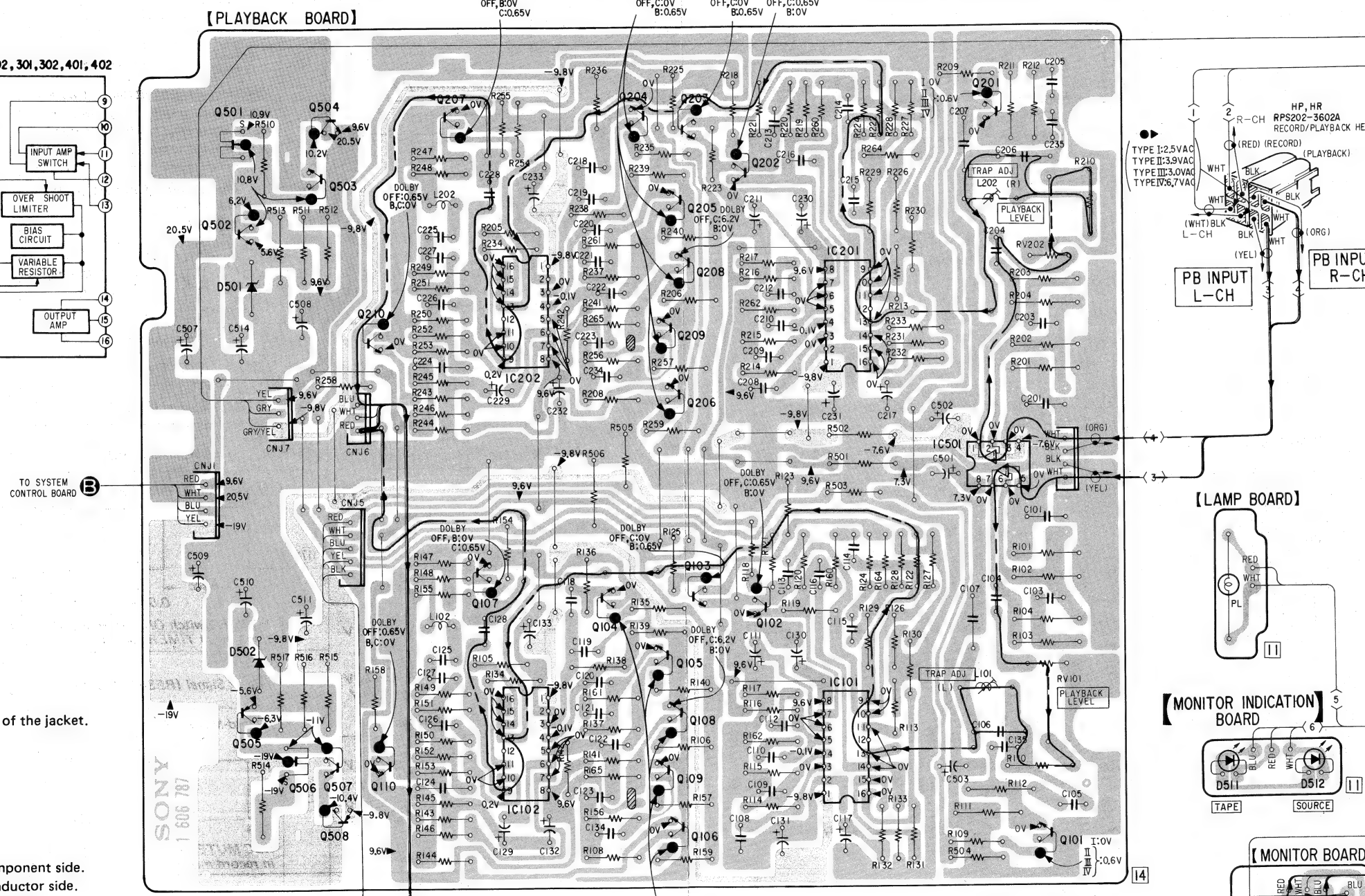
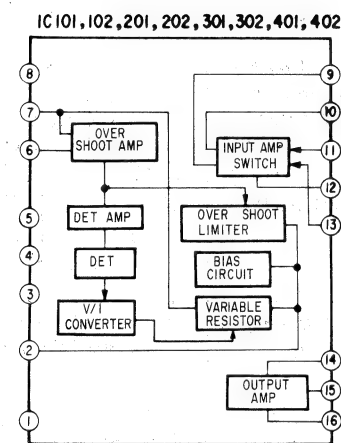
Note: Voltages are measured with an oscilloscope (10 M Ω probe). So readings are different from the mounting diagram and schematic diagram measured with a VOM.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

– Audio Section –

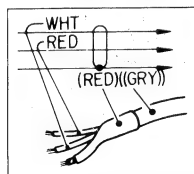
- See page 35 for semiconductor lead layouts.

Q	501	504		207		IC202		204	203		202			201		Q
IC	502	503	210						205				IC201			IC
									209	208				IC501		
	505	506	507 508	110	107	IC102	104	105	108		102		IC101		101	
D	501								109	106						D
	502													510 508	511	512

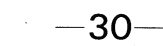


Note:

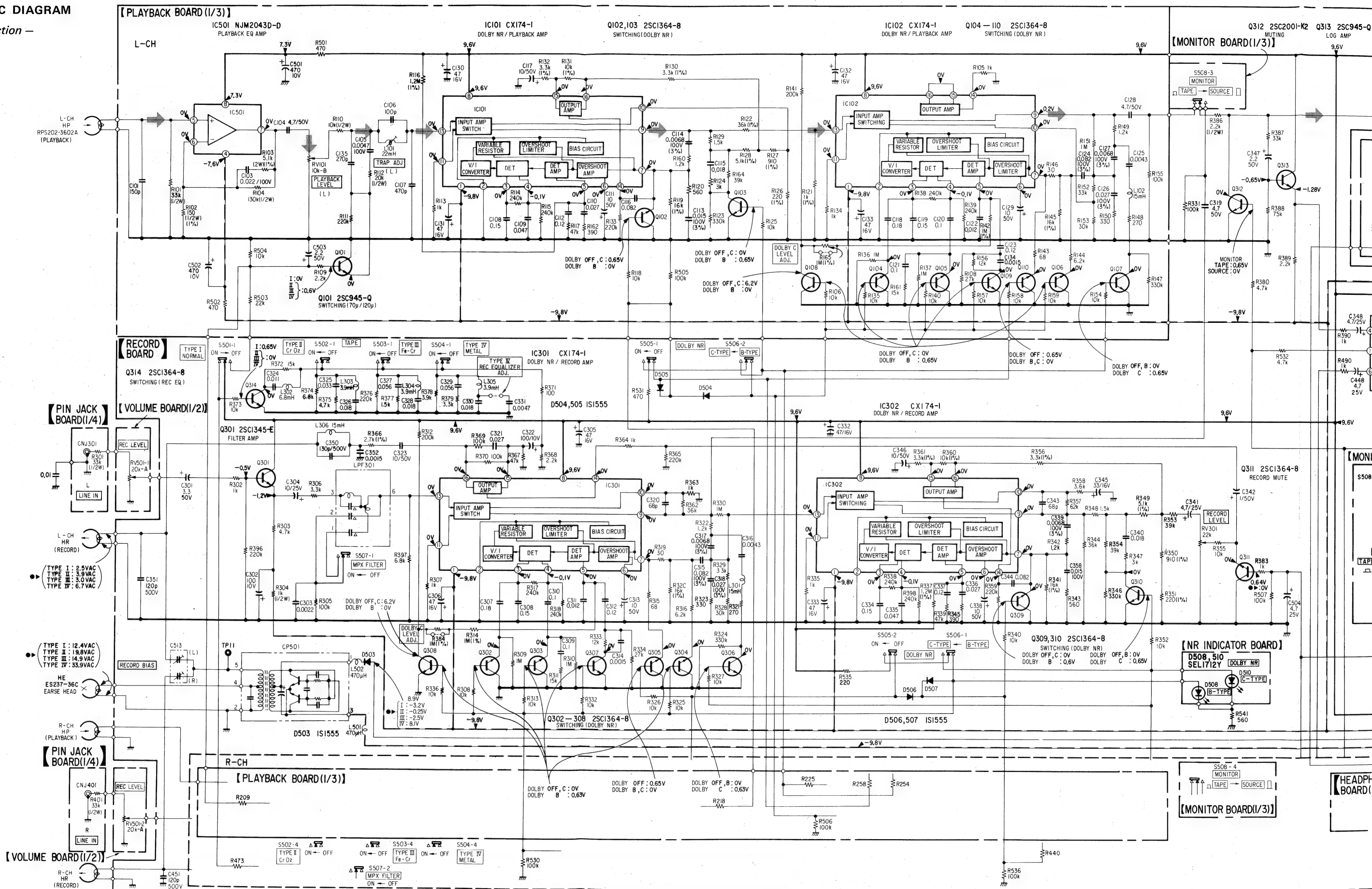
- Color code of sleeving over the end of the jacket.

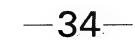


- ○ : parts extracted from the component side.
- — : parts extracted from the conductor side.
- ■ : part mounted on the conductor side.
- ■■■ : B + pattern
- ■■■■ : B - pattern
- ———→ : signal path.
- ———→ : L-CH signal path
- ———→ : R-CH signal path

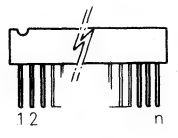
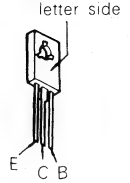
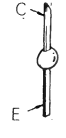
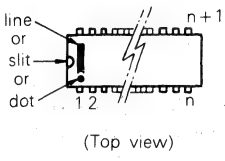
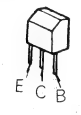
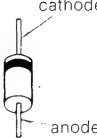
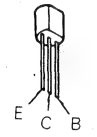
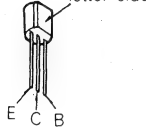
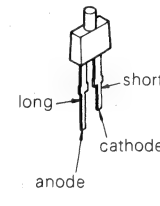
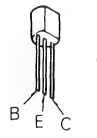
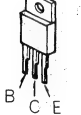
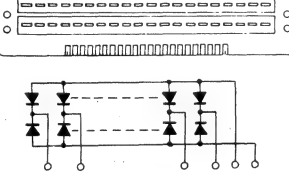
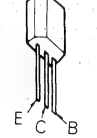

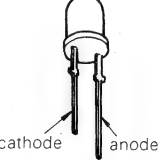
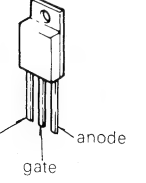
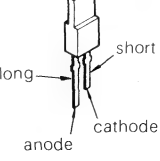


4-2. SCHEMATIC DIAGRAM
— Audio Section —





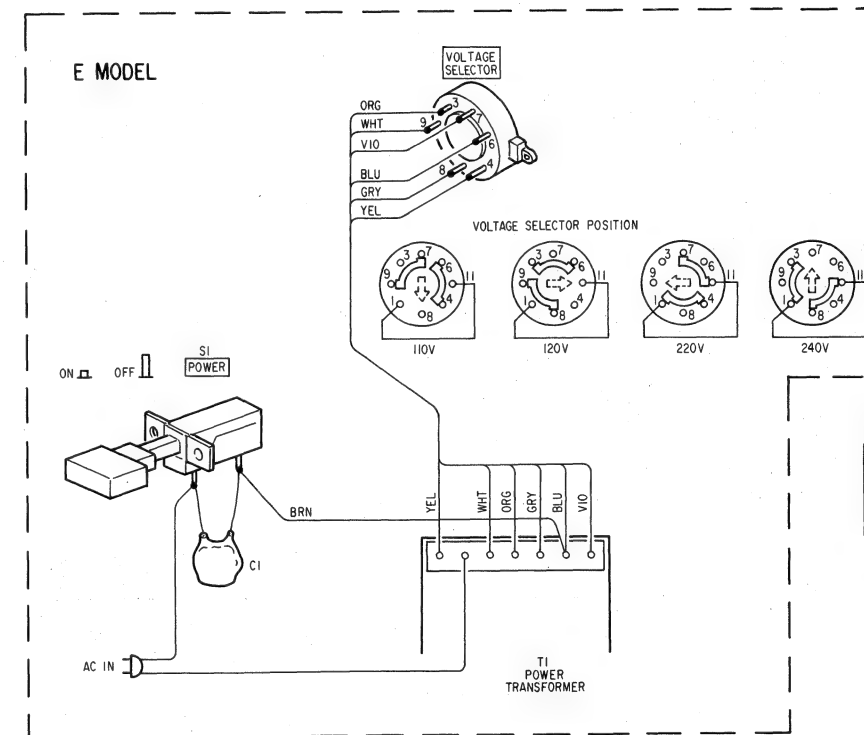
● Semiconductor Lead Layouts

BA6138 	2SB548 2SD414 2SD809 	PH102 
CX174A-1 NJM2043D-D MSM58361RS MSL9351RS μPC4557C  (Top view)	2SB734 2SD774 	HZ6B1L 1S1555 RD7.5JN1T 10E2 HZ9A2L 
2SA8444 2SC1345 2SC1364 2SC1364-8 2SC2001 2SD1152 	2SB808-G 2SD1012 	SEL1712Y 
2SA952 	2SD880 	SEL8806 
2SA1026-7 	2SK30A-0 	SLR-34DU5 SLR-34PG5 SLR-34UR5 
N13T-1 	SY435D SG235D 	

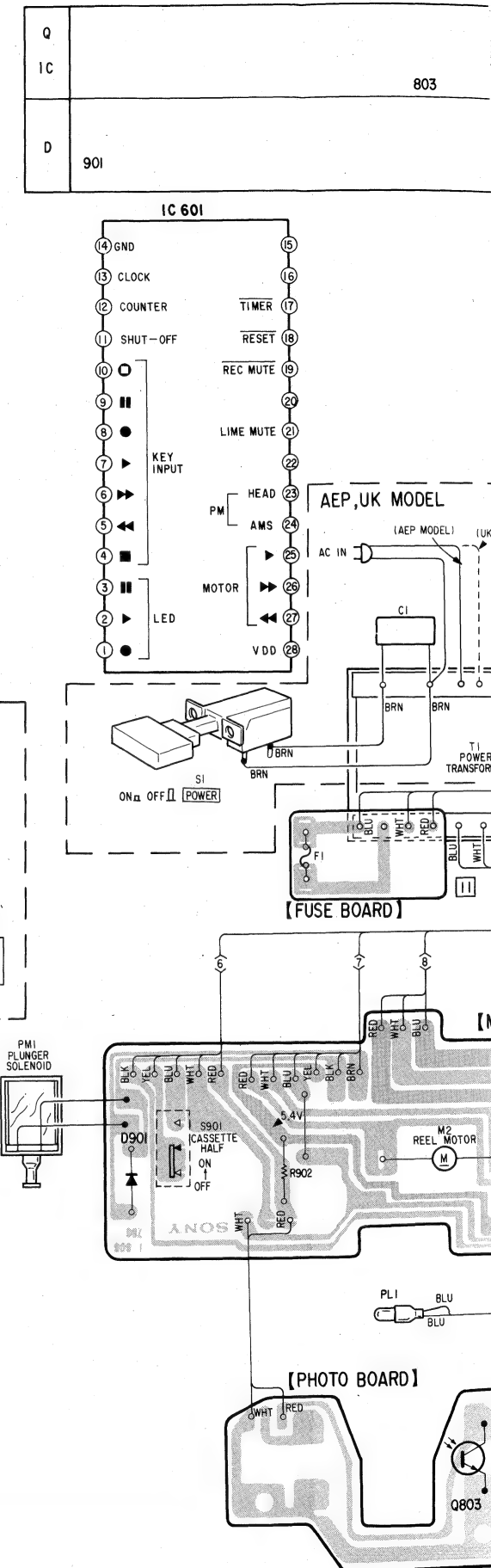
4-3. MOUNTING DIAGRAM

— System Control Section —

- See page 35 for semiconductor lead layouts.

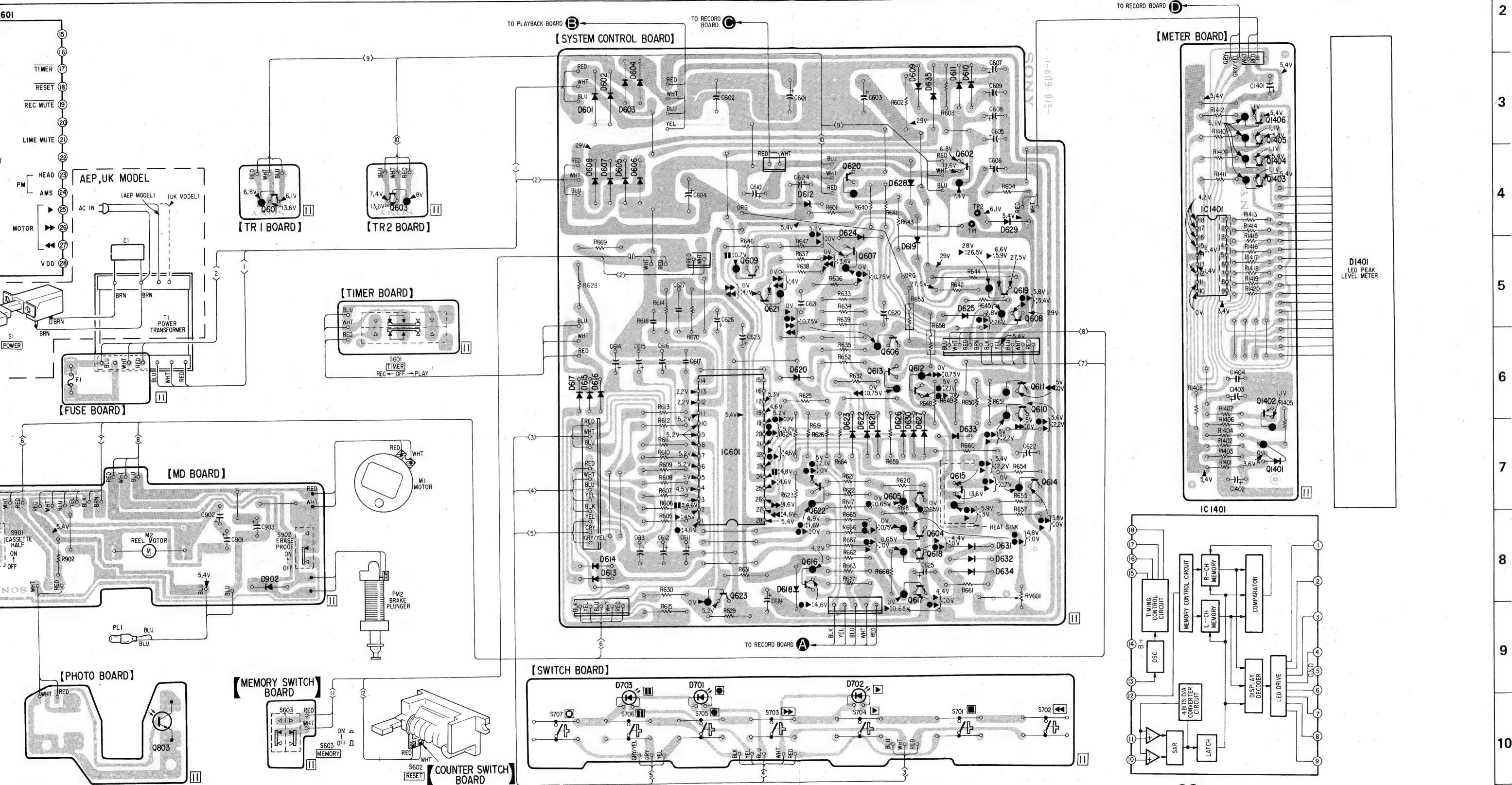


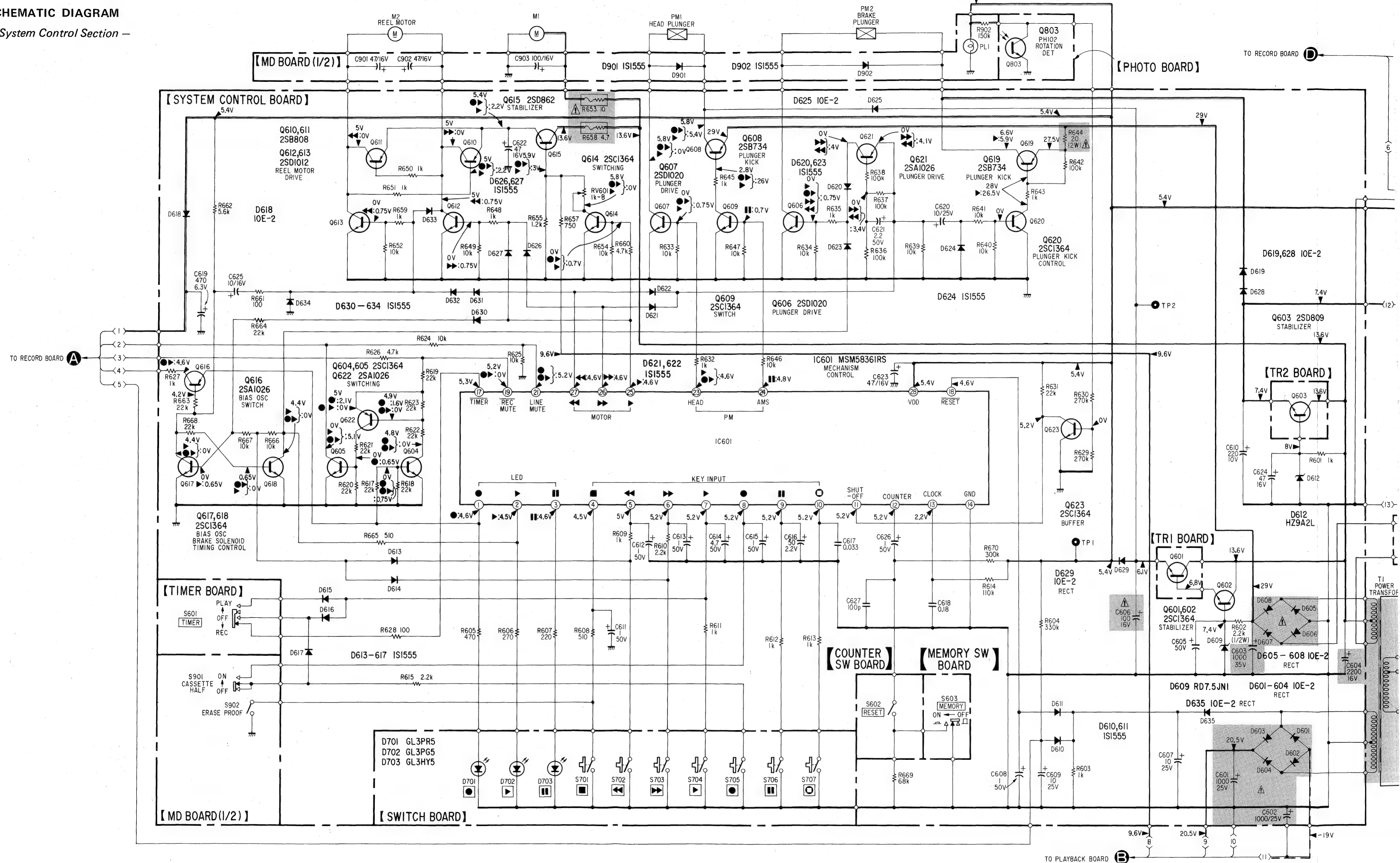
- Note:
- : parts extracted from the component side.
 - : parts extracted from the conductor side.
 - : B + pattern
 - : B - pattern



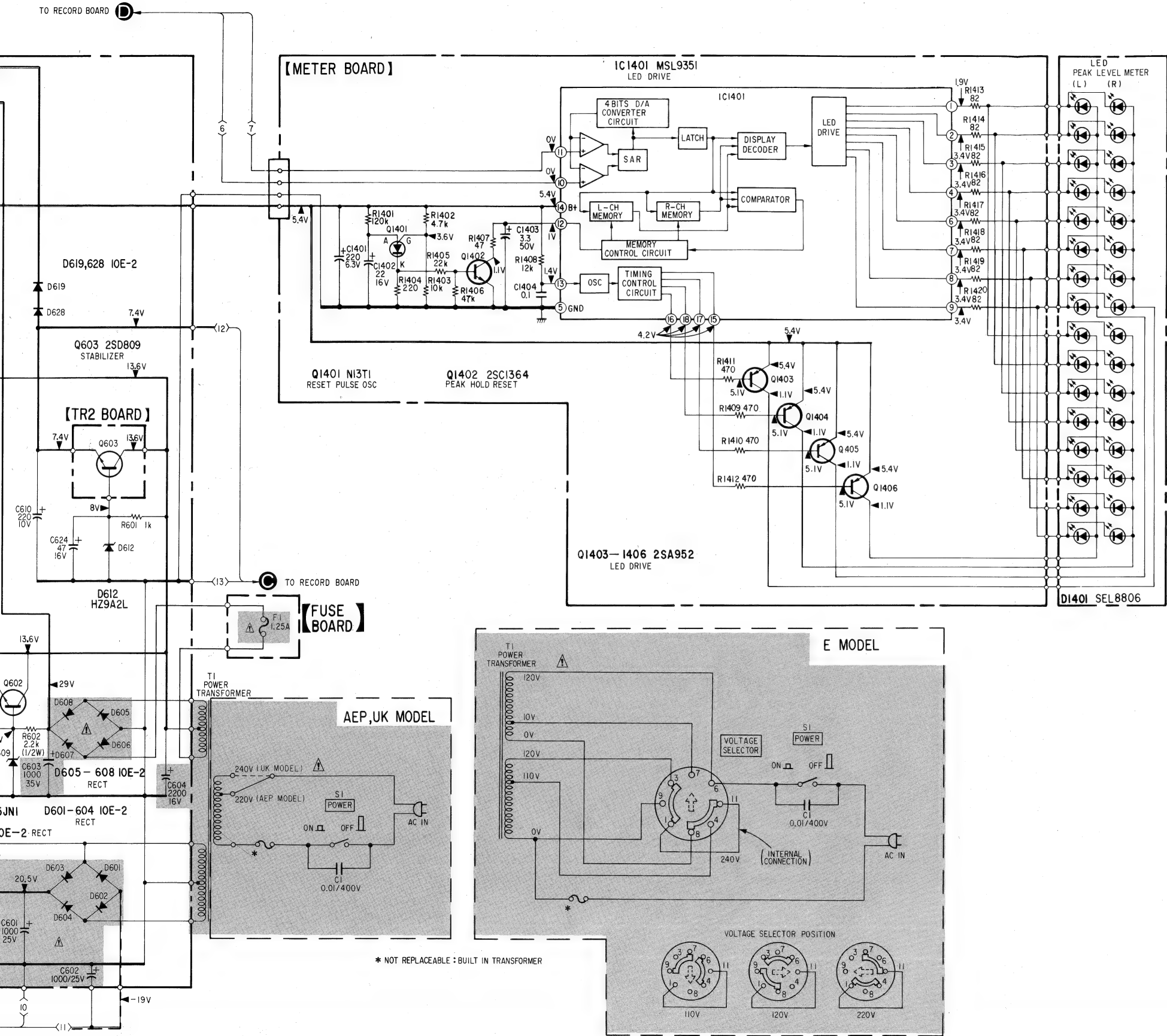
G H I J K L M N O P Q R S T U V W

										601	603	609	621	620	606	602	619	1406	Q
												IC601	622	607	613. 612	608	611	1405	
										803		623	616		605 618	610	614	1404	D
															604 617	615	614	1403	
										902		612	620	624	628	625	631	1402	
												618		702	623. 622. 621	633	632	1401	
												617. 615. 616	701		626. 630. 627	634			
												614. 613	703						



4-4. SCHEMATIC DIAGRAM
- System Control Section -

O P Q R S T U V W X Y Z A1 B2 C3 D4 E5



- Note:
- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
 - : fusible resistor.
 - : panel designation.
 - : B+ bus.
 - : B- bus.
 - Voltages are dc with respect to ground unless otherwise noted.
 - Readings are taken under no-signal conditions with a VOM (50 $\text{k}\Omega/\text{V}$).
 - Switches

Ref. No.	Switch	Position
S1	POWER	OFF
S601	TIMER	OFF
S602	RESET	OFF
S603	MEMORY	OFF
S701	STOP	OFF
S702	REW	OFF
S703	FF	OFF
S704	PLAY	OFF
S705	REC	OFF
S706	PAUSE	OFF
S707	REC MUTE	OFF
S902	ERASE PROOF	OFF

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

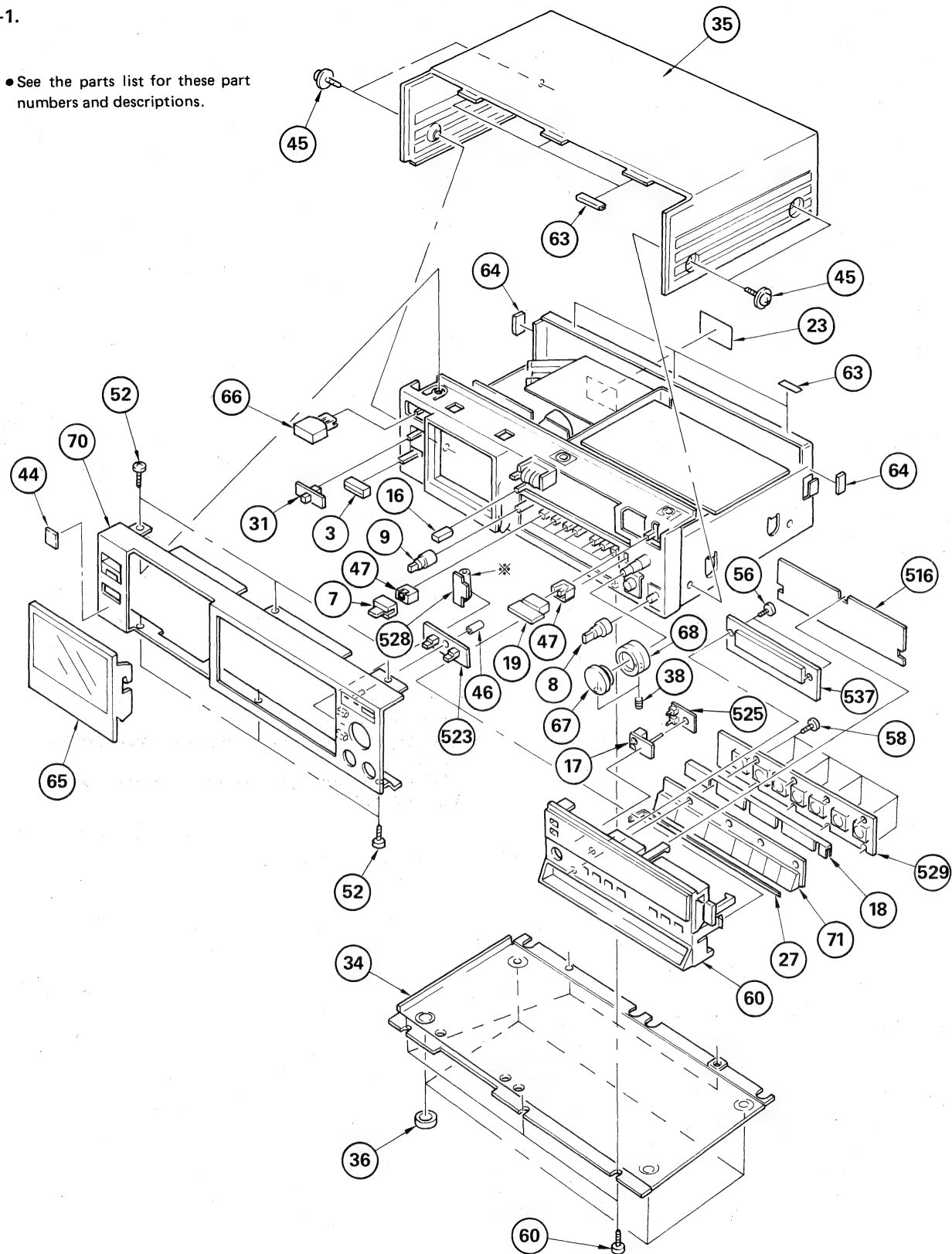
Note: Voltages are measured with a VOM (50 $\text{k}\Omega/\text{V}$).

SECTION 5

EXPLODED VIEWS AND PARTS LIST

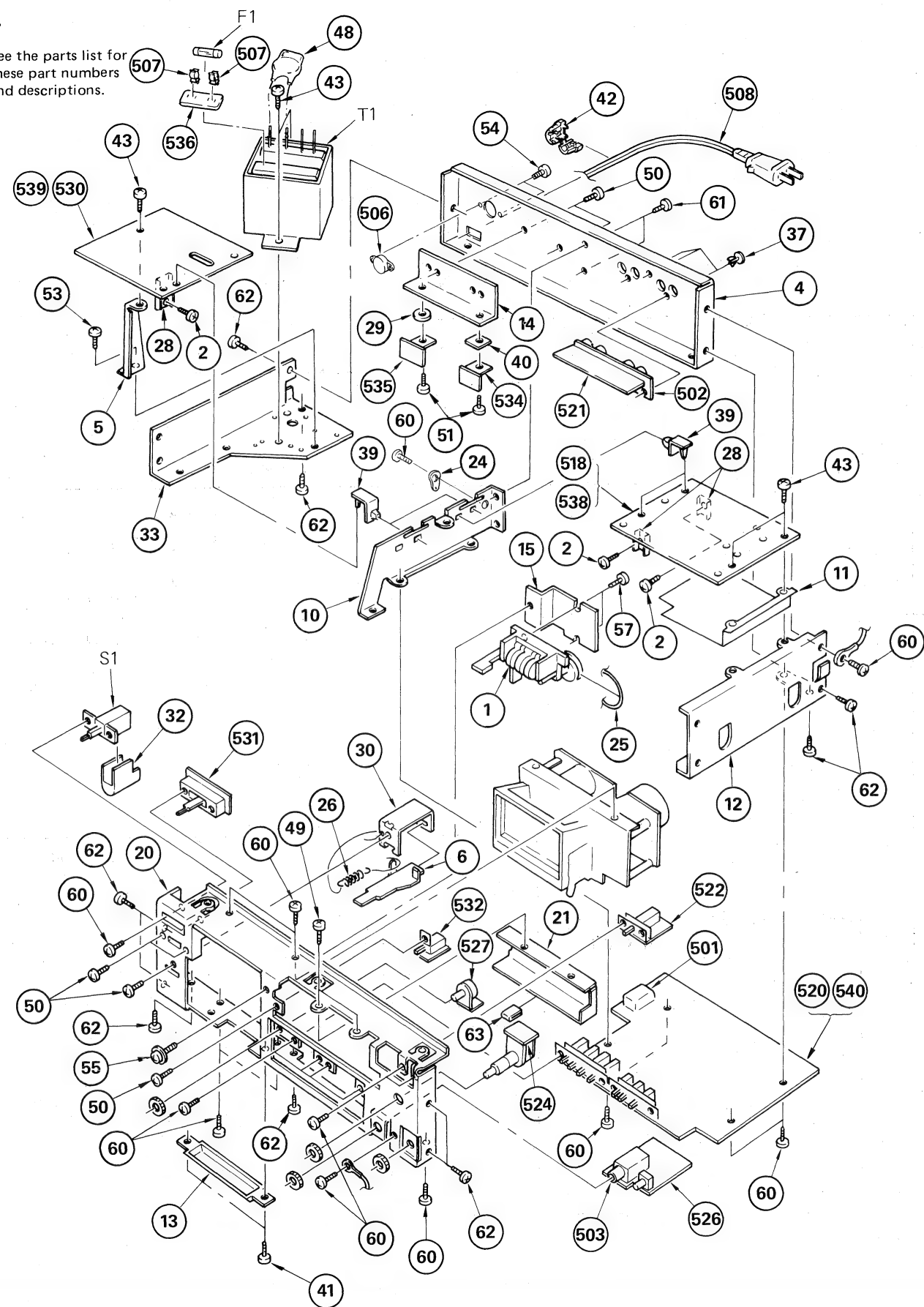
5-1.

- See the parts list for these part numbers and descriptions.


$$\otimes = \textcircled{22} \textcircled{505}$$

5-2.

- See the parts list for these part numbers and descriptions.

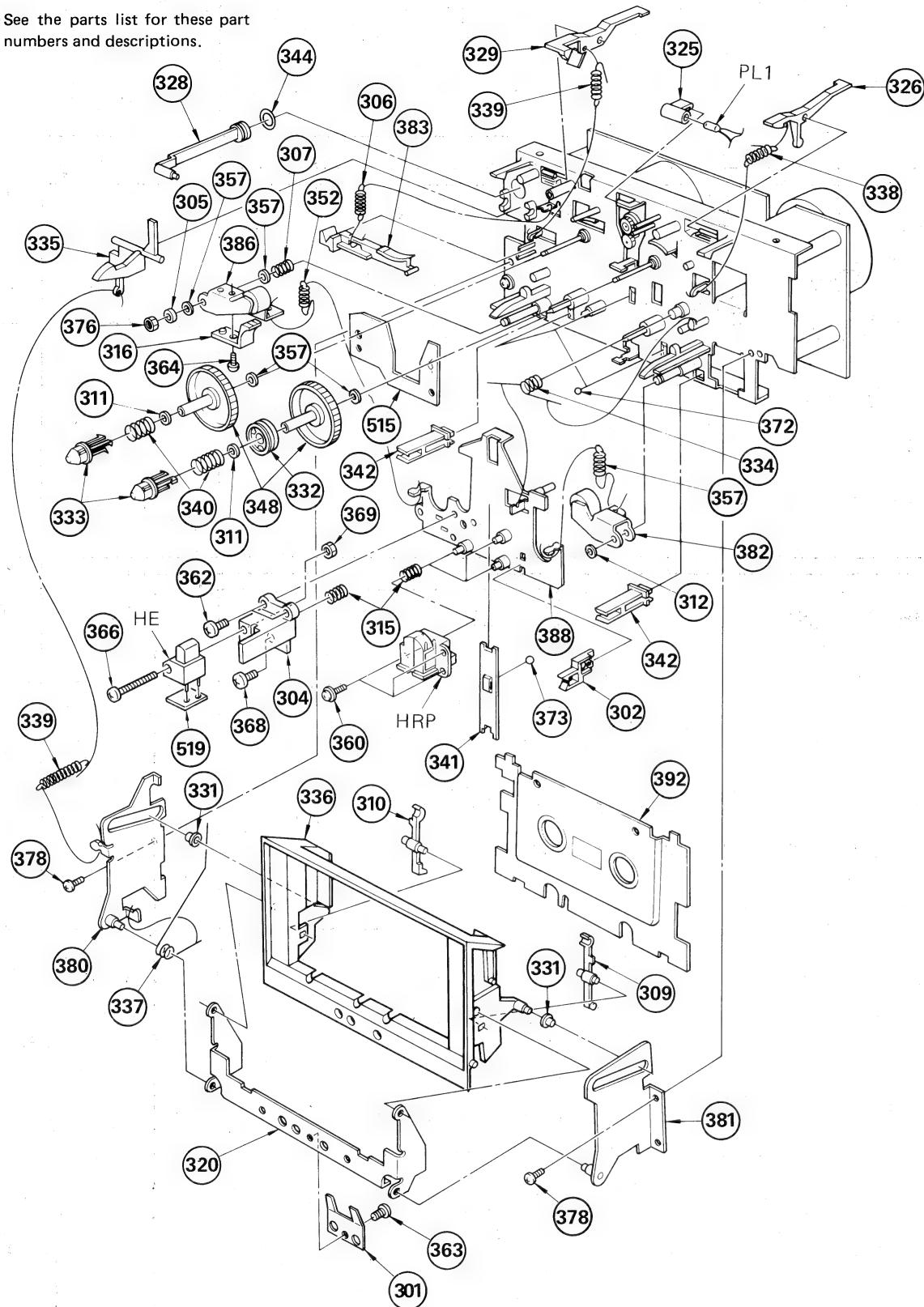


5-3.

- See the number

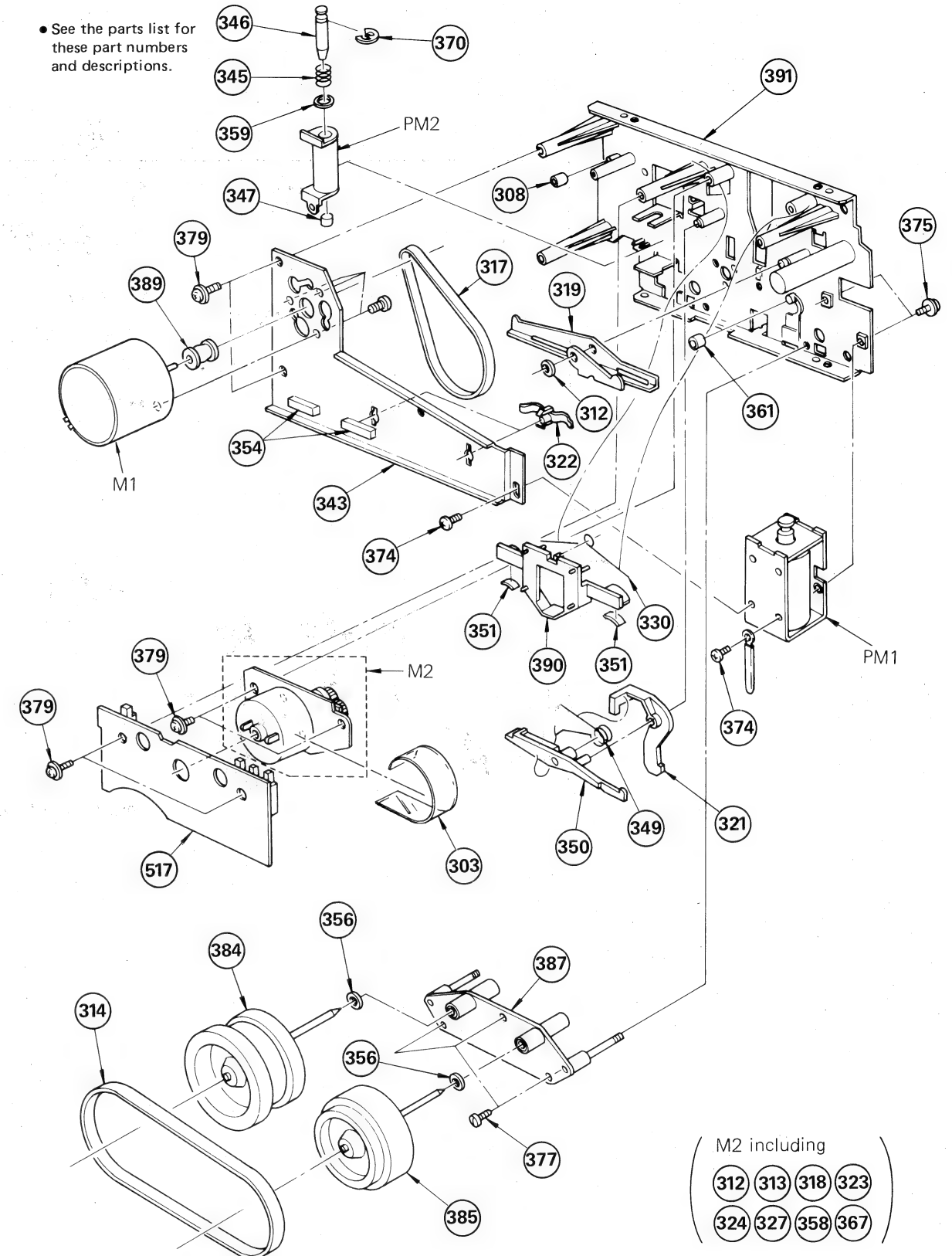
5-3.

- See the parts list for these part numbers and descriptions.



5-4.

- See the parts list for these part numbers and descriptions.



GENERAL SECTION

No.	Part No.	Description
1	1-548-537-81	COUNTER, TAPE
2	2-259-121-00	SCREW, TR
3	3-304-419-00	BUTTON, EJECT
4	♣;3-304-908-01	(AEP,UK)...PLATE, JACK
4	♣;3-304-908-12	(E).....PLATE, JACK
5	♣;3-304-910-00	BRACKET, PC BOARD
6	♣;3-304-911-00	SLIDER, EJECT
7	3-304-926-00	KNOB (A), PUSH
8	3-304-929-00	KNOB, HEADPHONE
9	3-304-930-00	KNOB, BIAS
10	♣;3-304-934-00	PLATE, RELAY
11	♣;3-304-942-00	PLATE, SHIELD, PLAYBACK PCB
12	♣;3-304-944-00	PLATE, SIDE, RIGHT
13	3-304-962-00	COVER, MD
14	♣;3-311-545-00	HEAT SINK
15	♣;3-311-903-00	HOLDER, COUNTER
16	3-311-904-00	KNOB, MEMORY
17	;3-311-909-00	HOLDER, INDICATION, NR
18	♣;3-311-910-00	BRACKET (B), CONTROL BUTTON
19	3-311-911-00	KNOB, MONITOR
20	♣;3-311-917-00	CHASSIS, AMPLIFIER
21	♣;3-311-919-00	PLATE, SHIELD, METER
22	♣;3-311-923-00	COVER, LAMP
23	3-311-924-00	(AEP)....LABEL, MODEL NUMBER (AEP1)
23	3-311-926-00	(E).....LABEL, MODEL NUMBER
23	3-311-927-00	(UK).....LABEL, MODEL NUMBER
24	3-460-077-00	CLAMP, WIRE
25	3-531-645-00	BELT, COUNTER
26	3-534-238-XX	SPRING, TENSION
27	♣;3-551-130-11	ELECTRIC DISCHARGE
28	♣;3-567-242-00	HEAT SINK
29	3-572-365-11	SHEET, INSULATING (A)
30	♣;3-575-502-00	BRACKET, EJECT
31	3-575-515-00	KNOB, SLIDE SWITCH
32	3-575-524-00	COVER, POWER SWITCH
33	♣;3-575-537-00	PLATE, SIDE, LEFT
34	3-575-538-12	PLATE, BOTTOM
35	3-575-539-00	CASE
36	3-576-731-00	FELT (H)
37	3-646-090-11	RIVET, NYLON
38	3-701-506-01	SET. SCREW, DOUBLE POINT 3X4
39	♣;3-701-832-00	HINGE, CIRCUIT BOARD
40	3-703-037-00	INSULATOR, TO-220
41	3-703-108-21	SCREW +BV 3X6, S TIGHT

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: μF .

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F: nonflammable

GENERAL SECTION

No.	Part No.	Description
42	3-703-244-00	BUSHING, CORD
43	3-703-486-00	+PTTW 3X5
44	3-703-710-01	STICKER, SONY SYMBOL (12)
45	4-820-330-21	SCREW, BW, PLUS MINUS
46	4-847-035-00	TUBE, ABSORBER
47	4-864-307-00	RING
48	4-875-455-21	COVER (DIA. 20), CAPACITOR
49	7-621-775-00	SCREW +B 2.6X3
50	7-621-775-20	SCREW +B 2.6X5
51	7-682-147-20	SCREW +P 3X6
52	7-682-246-04	SCREW +K 3X5
53	7-682-546-04	SCREW +BVTT 3X5 (S)
54	7-682-547-00	SCREW +B 3X6
55	7-682-947-01	SCREW +PSW 3X6
56	7-685-532-19	SCREW +BTP 2.6X5 TYPE2 N-S
57	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
58	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
59	7-685-861-09	SCREW +BVTT 2.6X5 (S)
60	7-685-871-01	SCREW +BVTT 3X6 (S)
61	7-685-871-09	SCREW +BVTT 3X6 (S)
62	7-685-872-01	SCREW +BVTT 3X8 (S)
63	9-911-837-XX	CUSHION, FILTER
64	9-911-841-XX	CUSHION
65	A-2169-071-A	WINDOW ASSY, CASSETTE
66	X-3304-405-0	KNOB ASSY, POWER
67	X-3304-909-4	KNOB (RIGHT) ASSY, REC
68	X-3304-910-5	KNOB (LEFT) ASSY, REC
69	X-3311-902-0	ESCUTCHEON (B) ASSY
70	X-3311-903-0	PANEL ASSY
71	X-3311-904-0	BUTTON ASSY, CONTROL

SEMICONDUCTORS

- In each case, U: μ , for example:
UA...: μA ..., UPA...: μPA ..., UPC...: μPC ,
UPD...: μPD ...

COILS

- MMH: mH, UH: μH

ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
101	1-551-734-11	CORD, CONNECTION (RK- 74A)
102	3-304-902-00	CUSHION (LEFT), UPPER
103	3-304-904-00	CUSHION (LEFT), LOWER
104	3-304-905-00	CUSHION (RIGHT), LOWER
105	3-304-956-00	SHEET, PROTECTION
106	3-311-922-00	CUSHION (RIGHT), UPPER
107	3-701-630-00	BAG, POLYETHYLENE
108	3-773-275-11	(UK,E)...MANUAL, INSTRUCTION
108	3-773-275-41	(AEP)...MANUAL, INSTRUCTION
109	3-793-481-13	INSTRUCTION
110	3-793-828-11	QUESTIONNAIRE
111	4-873-610-00	SHEET, PROTECTION
112	X-3701-105-0	ROD ASSY, CLEANING, HEAD

MECHANISM SECTION

No.	Part No.	Description
301	3-304-639-00	PLATE, SHIELD, HEAD
302	3-304-963-00	RETAINER, LEAD
303	3-306-209-00	PLATE (D), SHIELD, MOTOR
304	3-306-216-00	BRACKET, HEAD, ERASE
305	3-491-191-00	COLLAR
306	3-537-205-00	SPRING, TENSION
307	3-537-213-00	SPRING, COMPRESSION
308	3-538-051-00	RUBBER, BRAKE
309	3-555-113-00	SPRING (RIGHT)
310	3-555-114-00	SPRING (LEFT)
311	3-558-708-11	WASHER, STOPPER
312	3-558-708-21	WASHER, STOPPER
313	3-564-027-11	FELT, LIMITER
314	3-564-088-00	BELT (2), CAPSTAN
315	3-564-121-00	SPRING, COMPRESSION
316	3-564-138-00	GUIDE (S), TAPE
317	3-564-319-00	BELT, CAPSTAN
318	3-575-304-00	SHAFT, GEAR, FR
319	3-575-307-00	LEVER, FWD
320	3-575-314-00	LEVER, FULCRUM, HOLDER
321	3-575-318-00	LEVER, LOCK, TUNING
322	3-575-321-00	RETAINER, THRUST, CAPSTAN
323	3-575-324-00	GEAR, LIMITER
324	3-575-327-00	STOPPER
325	3-575-328-00	HOLDER, LAMP
326	3-575-331-00	LEVER, DETECTION, HALF
327	3-575-332-00	GEAR, FR
328	3-575-333-00	PISTON
329	3-575-334-00	LEVER, DETECTION, REC
330	3-575-345-00	SPRING
331	3-575-348-00	ROLLER, GUIDE, THREADING
332	3-575-349-00	PULLEY, CB
333	3-575-350-00	CLAW, REEL TABLE
334	3-575-351-00	SPRING
335	3-575-354-00	LEVER, LOCK
336	3-575-355-31	HOLDER, CASSETTE
337	3-575-356-00	SPRING
338	3-575-358-00	SPRING, TENSION
339	3-575-364-00	SPRING, TENSION
340	3-575-365-00	SPRING, COMPRESSION
341	3-575-377-00	SPRING
342	3-575-378-00	GUIDE, LEAD
343	3-575-381-00	RETAINER (W), THRUST
344	3-575-392-00	RING, PISTON
345	3-575-414-00	SPRING, COMPRESSION

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF, PF: μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F: nonflammable

SEMICONDUCTORS

- In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC...
UPD...: μPD...

COILS

- MMH: mH, UH: μH

MECHANISM SECTION

No.	Part No.	Description
346	3-575-415-11	ARBOR, MOVABLE
347	3-575-416-11	ARBOR, FIXED
348	3-575-447-00	TABLE, REEL
349	3-575-458-00	SPRING
350	3-575-460-00	LEVER, SELECT TUNE
351	3-575-469-00	SHOE, BRAKE
352	3-575-481-00	SPRING, TENSION
353	3-575-482-00	SPRING, TENSION
354	3-575-485-00	RUBER, VIBRATION PROOF
355	3-575-486-00	SHEET, VIBRATION PROOF
356	3-701-438-21	WASHER
357	3-701-439-21	WASHER
358	3-701-441-01	WASHER
359	3-701-444-11	WASHER, 6
360	3-701-467-01	SCREW, LOCK
361	4-855-109-12	RUBBER, LIFTER CUSHION
362	7-621-771-06	SCREW +B 2X5
363	7-621-772-00	SCREW +B 2X3
364	7-621-772-10	SCREW +B 2X4
365	7-621-772-30	SCREW +B 2X6
366	7-621-772-88	SCREW +B 2X16
367	7-621-775-10	SCREW +B 2.6X4
368	7-621-775-20	SCREW +B 2.6X5
369	7-622-205-05	N 2, TYPE 2
370	7-624-110-04	STOP RING 6.0, TYPE -E
371	7-628-253-95	SCREW +PS 2.6X4
372	7-671-112-11	BALL, STEEL
373	7-671-113-11	BALL, STEEL
374	7-682-546-04	SCREW +BVTT 3X5 (S)
375	7-682-949-01	SCREW +PSW 3X10
376	7-684-023-04	N 3, TYPE 2
377	7-685-791-01	SCREW +PTT 2.6X5 (S)
378	7-685-862-01	SCREW +BVTT 2.6X6 (S)
379	7-687-246-21	SCREW, TOTSU PTPWH 3X8, TYPE 2
380	Δ; X-3575-301-0	PLATE (A) ASSY, HOLDER FULCRUM
381	Δ; X-3575-302-0	PLATE (B) ASSY, FULCRUM
382	X-3575-304-0	PINCH LEVER (T) ASSY
383	X-3575-310-0	LEVER ASSY, TENSION, BACK
384	X-3575-319-0	FLYWHEEL (RIGHT) ASSY
385	X-3575-320-0	FLYWHEEL (LEFT) ASSY
386	X-3575-321-0	PINCH LEVER (S) ASSY
387	X-3575-322-0	BASE ASSY, CAPSTAN
388	X-3575-323-0	CHASSIS ASSY, HEAD
389	X-3575-328-1	PULLEY, MOTOR
390	Δ; X-3575-342-0	PLATE ASSY, BRAKE
391	Δ; X-3575-344-0	CHASSIS ASSY, MECHANISM
392	X-3575-347-0	PLATE ASSY, ORNAMENTAL

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "Δ" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF, PF: μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

COILS

- MMH: mH, UH: μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	1-464-252-00	OSCILLATION UNIT, BIAS
502	1-507-531-00	PLATE, PIN-JACK
503	1-507-659-00	JACK
504	Δ; 1-508-879-00	BASE POST
505	1-518-489-21	LAMP, PILOT
506	Δ; 1-526-576-31	(E)...SELECTOR, POWER VOLTAGE
507	1-533-131-00	HOLDER, FUSE
508	Δ; 1-534-817-XX	(AEP).....CORD, POWER
508	Δ; 1-551-884-00	(AEP,UK)....CORD, POWER
508	Δ; 1-555-735-11	(E).....CORD, POWER
509	Δ; 1-560-060-00	PIN, CONNECTOR 2P
510	Δ; 1-560-061-00	PIN, CONNECTOR 3P
511	Δ; 1-560-062-00	PIN, CONNECTOR 4P
512	Δ; 1-560-063-00	PIN, CONNECTOR 5P
513	Δ; 1-560-230-00	PIN, CONNECTOR 12P
514	Δ; 1-560-339-00	PIN, CONNECTOR 9P
515	Δ; 1-603-823-00	PC BOARD, PHOTO
516	Δ; 1-603-905-00	PC BOARD, METER
517	Δ; 1-606-786-00	PC BOARD, MD
518	Δ; 1-606-787-00	PC BOARD, PB
519	Δ; 1-608-268-00	PC BOARD, ERASE HEAD
520	Δ; 1-609-274-00	PC BOARD, REC
521	Δ; 1-609-275-00	PC BOARD, PIN JACK
522	Δ; 1-609-276-00	PC BOARD, MONITOR SWITCH
523	Δ; 1-609-277-00	PC BOARD, MONITOR INDICATION
524	Δ; 1-609-278-00	PC BOARD, REC VOL
525	Δ; 1-609-279-00	PC BOARD, NR INDICATOR
526	Δ; 1-609-280-00	PC BOARD, HEADPHONE
527	Δ; 1-609-281-00	PC BOARD, BIAS FINE VOL
528	Δ; 1-609-282-00	PC BOARD, LAMP
529	Δ; 1-609-283-00	PC BOARD, CONTROL SWITCH
530	Δ; 1-609-284-00	PC BOARD, SYSCON
531	Δ; 1-609-285-00	PC BOARD, TIMER SWITCH
532	Δ; 1-609-286-00	PC BOARD, MEMORY SWITCH
534	Δ; 1-609-287-00	PC BOARD, TRANSISTOR 1
535	Δ; 1-609-288-00	PC BOARD, TRANSISTOR 2
536	Δ; 1-609-937-00	PC BOARD, FUSE
537	1-806-076-11	DIODE (LED BLOCK) SEL-8806A
538	A-2008-038-A	MOUNTED PCB, PB
539	A-2056-188-A	MOUNTED PCB, SYSTEM CONTROL
540	A-2056-189-A	MOUNTED PCB, REC
C1	Δ; 1-161-744-00	CAP, CERAMIC 10000PF
C101	1-107-173-00	MICA 150P 5% 500V
C103	1-130-305-00	FILM 0.022MF 5% 100V
C104	1-123-830-00	ELECT 4.7MF 20% 50V
C105	1-108-571-00	MYLAR 0.0047MF 5% 50V
C106	1-161-271-00	CERAMIC 100PF 5% 50V

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

SEMICONDUCTORS

In each case, U: μ, for example:
 UA....: μA...., UPA....: μPA...., UPC....: μPC,
 UPD....: μPD....

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C107	1-161-319-00	CERAMIC	470PF	10%	50V
C108	1-130-634-00	FILM	0.15MF	5%	50V
C109	1-130-628-00	FILM	0.047MF	5%	50V
C110	1-130-625-00	FILM	0.027MF	5%	50V
C111	1-123-356-00	ELECT	10MF	20%	50V
C112	1-130-633-00	FILM	0.12MF	5%	50V
C113	1-130-892-00	FILM	0.015MF	3%	100V
C114	1-130-856-00	FILM	0.0068MF	3%	100V
C115	1-130-623-00	FILM	0.018MF	5%	50V
C116	1-130-631-00	FILM	0.082MF	5%	50V
C117	1-123-356-00	ELECT	10MF	20%	50V
C118	1-130-635-00	FILM	0.18MF	5%	50V
C119	1-130-634-00	FILM	0.15MF	5%	50V
C120	1-130-632-00	FILM	0.1MF	5%	50V
C121	1-130-632-00	FILM	0.1MF	5%	50V
C122	1-130-621-00	FILM	0.012MF	5%	50V
C123	1-130-633-00	FILM	0.12MF	5%	50V
C124	1-130-851-00	FILM	0.082MF	3%	100V
C125	1-108-570-00	MYLAR	0.0043MF	5%	50V
C126	1-130-893-00	FILM	0.027MF	3%	100V
C127	1-130-856-00	FILM	0.0068MF	3%	100V
C128	1-123-232-00	ELECT	4.7MF	20%	50V
C129	1-123-356-00	ELECT	10MF	20%	50V
C130	1-123-332-00	ELECT	47MF	20%	16V
C131	1-123-319-00	ELECT	47MF	20%	16V
C132	1-123-332-00	ELECT	47MF	20%	16V
C133	1-123-319-00	ELECT	47MF	20%	16V
C134	1-108-559-00	MYLAR	0.0015MF	5%	50V
C135	1-102-111-00	CERAMIC	270PF	10%	50V
C203	1-130-305-00	FILM	0.022MF	5%	100V
C204	1-123-830-00	ELECT	4.7MF	20%	50V
C207	1-161-319-00	CERAMIC	470PF	10%	50V
C208	1-130-634-00	FILM	0.15MF	5%	50V
C209	1-130-628-00	FILM	0.047MF	5%	50V
C210	1-130-625-00	FILM	0.027MF	5%	50V
C213	1-130-892-00	FILM	0.015MF	3%	100V
C214	1-130-856-00	FILM	0.0068MF	3%	100V
C215	1-130-623-00	FILM	0.018MF	5%	50V
C219	1-130-634-00	FILM	0.15MF	5%	50V
C220	1-130-632-00	FILM	0.1MF	5%	50V
C221	1-130-632-00	FILM	0.1MF	5%	50V
C222	1-130-621-00	FILM	0.012MF	5%	50V
C224	1-130-851-00	FILM	0.082MF	3%	100V
C226	1-130-893-00	FILM	0.027MF	3%	100V
C227	1-130-856-00	FILM	0.0068MF	3%	100V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C228	1-123-232-00	ELECT	4.7MF	20%	50V
C301	1-123-354-00	ELECT	3.3MF	20%	50V
C302	1-124-069-00	ELECT	100MF	20%	10V
C303	1-161-375-00	CERAMIC	0.0022MF	20%	50V
C304	1-123-356-00	ELECT	10MF	20%	50V
C305	1-123-319-00	ELECT	47MF	20%	16V
C306	1-123-319-00	ELECT	47MF	20%	16V
C307	1-130-635-00	FILM	0.18MF	5%	50V
C308	1-130-634-00	FILM	0.15MF	5%	50V
C309	1-130-632-00	FILM	0.1MF	5%	50V
C310	1-130-632-00	FILM	0.1MF	5%	50V
C311	1-130-621-00	FILM	0.012MF	5%	50V
C312	1-130-633-00	FILM	0.12MF	5%	50V
C313	1-123-356-00	ELECT	10MF	20%	50V
C314	1-108-559-00	MYLAR	0.0015MF	5%	50V
C315	1-130-851-00	FILM	0.082MF	3%	100V
C316	1-108-570-00	MYLAR	0.0043MF	5%	50V
C317	1-130-856-00	FILM	0.0068MF	3%	100V
C318	1-130-893-00	FILM	0.027MF	3%	100V
C319	1-123-232-00	ELECT	4.7MF	20%	50V
C320	1-161-269-00	CERAMIC	68PF	5%	50V
C321	1-130-625-00	FILM	0.027MF	5%	50V
C322	1-124-069-00	ELECT	100MF	20%	10V
C323	1-123-234-00	ELECT	10MF	20%	50V
C324	1-108-580-00	FILM	0.011MF	5%	50V
C325	1-130-626-00	FILM	0.033MF	5%	50V
C326	1-130-623-00	MYLAR	0.018MF	5%	50V
C327	1-130-629-00	FILM	0.056MF	5%	50V
C328	1-130-623-00	FILM	0.018MF	5%	50V
C329	1-130-629-00	FILM	0.056MF	5%	50V
C330	1-130-623-00	FILM	0.018MF	5%	50V
C331	1-108-571-00	MYLAR	0.0047MF	5%	50V
C332	1-123-319-00	ELECT	47MF	20%	16V
C333	1-123-319-00	ELECT	47MF	20%	16V
C334	1-130-634-00	FILM	0.15MF	5%	50V
C335	1-130-628-00	FILM	0.047MF	5%	50V
C336	1-130-625-00	FILM	0.027MF	5%	50V
C337	1-130-633-00	FILM	0.12MF	5%	50V
C338	1-123-356-00	ELECT	10MF	20%	50V
C339	1-130-856-00	FILM	0.0068MF	3%	100V
C340	1-130-623-00	FILM	0.018MF	5%	50V
C341	1-123-369-00	ELECT	4.7MF	20%	50V
C342	1-123-380-00	ELECT	1MF	20%	50V
C343	1-161-269-00	CERAMIC	68PF	5%	50V
C344	1-130-631-00	FILM	0.082MF	5%	50V

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: μpF .

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F: nonflammable

SEMICONDUCTORS

- In each case, U: μ , for example:
UA...: μA ..., UPA...: μPA ..., UPC...: μPC ..., UPD...: μPD ...

COILS

- MMH: mH, UH: μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C345	1-123-318-00	ELECT	33MF	20%	16V
C346	1-123-356-00	ELECT	10MF	20%	50V
C347	1-123-353-00	ELECT	2.2MF	20%	50V
C348	1-123-328-00	ELECT	4.7MF	20%	25V
C349	1-123-353-00	ELECT	2.2MF	20%	50V
C350	1-107-172-00	MICA	130PF	5%	500V
C351	1-107-171-00	MICA	120PF	5%	500V
C352	1-161-041-00	CERAMIC	0.0015MF	20%	50V
C358	1-130-892-00	FILM	0.015MF	3%	100V
C408	1-130-634-00	FILM	0.15MF	5%	50V
C409	1-130-632-00	FILM	0.1MF	5%	50V
C410	1-130-632-00	FILM	0.1MF	5%	50V
C411	1-130-621-00	FILM	0.012MF	5%	50V
C415	1-130-851-00	FILM	0.082MF	3%	100V
C417	1-130-856-00	FILM	0.0068MF	3%	100V
C418	1-130-893-00	FILM	0.027MF	3%	100V
C419	1-123-232-00	ELECT	4.7MF	20%	50V
C421	1-130-625-00	FILM	0.027MF	5%	50V
C423	1-123-234-00	ELECT	10MF	20%	50V
C424	1-108-580-00	FILM	0.011MF	5%	50V
C425	1-130-626-00	FILM	0.033MF	5%	50V
C427	1-130-629-00	FILM	0.056MF	5%	50V
C428	1-130-623-00	FILM	0.018MF	5%	50V
C429	1-130-629-00	FILM	0.056MF	5%	50V
C430	1-130-623-00	FILM	0.018MF	5%	50V
C434	1-130-634-00	FILM	0.15MF	5%	50V
C435	1-130-628-00	FILM	0.047MF	5%	50V
C436	1-130-625-00	FILM	0.027MF	5%	50V
C439	1-130-856-00	FILM	0.0068MF	3%	100V
C440	1-130-623-00	FILM	0.018MF	5%	50V
C450	1-107-172-00	MICA	130PF	5%	500V
C451	1-107-171-00	MICA	120PF	5%	500V
C452	1-161-041-00	CERAMIC	0.0015MF	20%	50V
C458	1-130-892-00	FILM	0.015MF	3%	100V
C501	1-123-310-00	ELECT	470MF	20%	10V
C502	1-123-310-00	ELECT	470MF	20%	10V
C503	1-123-353-00	ELECT	2.2MF	20%	50V
C504	1-123-328-00	ELECT	4.7MF	20%	25V
C505	1-123-307-00	ELECT	100MF	20%	10V
C506	1-123-307-00	ELECT	100MF	20%	10V
C507	1-123-335-00	ELECT	330MF	20%	25V
C508	1-123-311-00	ELECT	1000MF	20%	10V
C509	1-123-335-00	ELECT	330MF	20%	25V
C510	1-123-306-00	ELECT	47MF	20%	10V
C511	1-123-311-00	ELECT	1000MF	20%	10V

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C512	1-123-351-00	ELECT	0.47MF	20%	50V
C513	1-141-225-00	CAP, TUNING, TRIMAR			
C514	1-123-306-00	ELECT	47MF	20%	10V
C515	1-123-319-00	ELECT	47MF	20%	16V
C516	1-101-004-00	CERAMIC	0.01MF		50V
C517	1-101-880-00	CERAMIC	47PF	5%	50V
C518	1-161-330-00	CERAMIC	0.01MF	30%	25V
C601	1-123-337-00	ELECT	1000MF	20%	25V
C602	1-123-337-00	ELECT	1000MF	20%	25V
C603	1-123-349-00	ELECT	1000MF	20%	35V
C604	1-123-325-00	ELECT	2200MF	20%	16V
C605	1-123-380-00	ELECT	1MF	20%	50V
C606	1-123-320-00	ELECT	100MF	20%	16V
C607	1-123-356-00	ELECT	10MF	20%	25V
C608	1-123-380-00	ELECT	1MF	20%	50V
C609	1-123-356-00	ELECT	10MF	20%	25V
C610	1-123-308-00	ELECT	220MF	20%	10V
C611	1-123-380-00	ELECT	1MF	20%	50V
C612	1-123-380-00	ELECT	1MF	20%	50V
C613	1-123-380-00	ELECT	1MF	20%	50V
C614	1-123-369-00	ELECT	4.7MF	20%	50V
C615	1-123-380-00	ELECT	1MF	20%	50V
C616	1-123-353-00	ELECT	2.2MF	20%	50V
C617	1-130-626-00	FILM	0.033MF	5%	50V
C618	1-130-635-00	FILM	0.18MF	5%	50V
C619	1-123-298-00	ELECT	470MF	20%	6.3V
C620	1-123-356-00	ELECT	10MF	20%	25V
C621	1-123-353-00	ELECT	2.2MF	20%	50V
C622	1-123-319-00	ELECT	47MF	20%	16V
C623	1-123-319-00	ELECT	47MF	20%	16V
C624	1-123-319-00	ELECT	47MF	20%	16V
C625	1-123-356-00	ELECT	10MF	20%	16V
C626	1-123-380-00	ELECT	1MF	20%	50V
C627	1-161-271-00	CERAMIC	100PF	5%	50V
C901	1-123-332-00	ELECT	47MF	20%	16V
C902	1-123-332-00	ELECT	47MF	20%	16V
C903	1-123-333-00	ELECT	100MF	20%	16V
C1401	1-123-296-00	ELECT	220MF	20%	6.3V
C1402	1-123-330-00	ELECT	22MF	20%	16V
C1403	1-123-382-00	ELECT	3.3MF	20%	50V
C1404	1-130-632-00	FILM	0.1MF	5%	50V
D501	8-719-910-64	DIODE HZ6B1L			
D502	8-719-910-64	DIODE HZ6B1L			
D503	8-719-815-55	DIODE 1S1555			
D504	8-719-815-55	DIODE 1S1555			
D505	8-719-815-55	DIODE 1S1555			
D506	8-719-815-55	DIODE 1S1555			

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CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers. MF: μF , PF: μF .

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F : nonflammable

COILS

- MMH : mH, UH : μH

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

SEMICONDUCTORS

In each case, U : μ , for example:
 UA.... : μA ..., UPA.... : μPA ..., UPC.... : μPC ,
 UPD.... : μPD ...

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D507	8-719-815-55	DIODE 1S1555
D508	8-719-317-12	DIODE SEL1712Y
D509	8-719-815-55	DIODE 1S1555
D510	8-719-317-12	DIODE SEL1712Y
D511	8-719-107-61	DIODE SG235D
D512	8-719-107-60	DIODE SY435D
D601	8-719-200-02	DIODE 10E-2
D602	8-719-200-02	DIODE 10E-2
D603	8-719-200-02	DIODE 10E-2
D604	8-719-200-02	DIODE 10E-2
D605	8-719-200-02	DIODE 10E-2
D606	8-719-200-02	DIODE 10E-2
D607	8-719-200-02	DIODE 10E-2
D608	8-719-200-02	DIODE 10E-2
D609	8-719-103-39	DIODE RD7.5JN1T
D610	8-719-815-55	DIODE 1S1555
D611	8-719-815-55	DIODE 1S1555
D612	8-719-910-92	DIODE HZ9A2L
D613	8-719-815-55	DIODE 1S1555
D614	8-719-815-55	DIODE 1S1555
D615	8-719-815-55	DIODE 1S1555
D616	8-719-815-55	DIODE 1S1555
D617	8-719-815-55	DIODE 1S1555
D618	8-719-200-02	DIODE 10E-2
D619	8-719-200-02	DIODE 10E-2
D620	8-719-815-55	DIODE 1S1555
D621	8-719-815-55	DIODE 1S1555
D622	8-719-815-55	DIODE 1S1555
D623	8-719-815-55	DIODE 1S1555
D624	8-719-815-55	DIODE 1S1555
D625	8-719-200-02	DIODE 10E-2
D626	8-719-815-55	DIODE 1S1555
D627	8-719-815-55	DIODE 1S1555
D628	8-719-200-02	DIODE 10E-2
D629	8-719-200-02	DIODE 10E-2
D630	8-719-815-55	DIODE 1S1555
D631	8-719-815-55	DIODE 1S1555
D632	8-719-815-55	DIODE 1S1555
D633	8-719-815-55	DIODE 1S1555
D634	8-719-815-55	DIODE 1S1555
D635	8-719-200-02	DIODE 10E-2
D701	8-719-902-33	DIODE SLR-34UR5
D702	8-719-902-26	DIODE SLR-34PG5
D703	8-719-902-25	DIODE SLR-34DU5
D901	8-719-815-55	DIODE 1S1555

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COILS

- MMH : mH, UH : μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description
D902	8-719-815-55	DIODE 1S1555
D1401	8-719-815-55	DIODE 1S1555
D1402	8-719-815-55	DIODE 1S1555
F1	1-532-285-00	FUSE, TIME-LAG
HE	8-825-535-30	HEAD, ERASE (ES237-36C)
HRP	8-825-500-30	HEAD, REC/PB (RPA230-3602)
IC101	8-759-100-04	IC CX174-1
IC101	8-759-100-53	IC CX174-3
IC102	8-759-100-04	IC CX174-1
IC102	8-759-100-53	IC CX174-3
IC201	8-759-100-04	IC CX174-1
IC201	8-759-100-53	IC CX174-3
IC202	8-759-100-04	IC CX174-1
IC202	8-759-100-53	IC CX174-3
IC301	8-759-100-04	IC CX174-1
IC301	8-759-100-53	IC CX174-3
IC302	8-759-100-04	IC CX174-1
IC302	8-759-100-53	IC CX174-3
IC401	8-759-100-04	IC CX174-1
IC401	8-759-100-53	IC CX174-3
IC402	8-759-100-04	IC CX174-1
IC402	8-759-100-53	IC CX174-3
IC501	8-759-700-04	IC NJM2043D-D
IC502	8-759-961-38	IC BA6138
IC503	8-759-145-57	IC UPC4557C
IC601	8-759-900-71	IC MSM58361RS
IC1401	8-759-993-51	IC MSL9351RS
L101	1-407-240-00	MICRO INDUCTOR 22MMH
L102	1-408-259-00	MICRO INDUCTOR 15MMH
L201	1-407-240-00	MICRO INDUCTOR 22MMH
L202	1-408-259-00	MICRO INDUCTOR 15MMH
L301	1-408-259-00	MICRO INDUCTOR 15MMH
L302	1-408-255-00	MICRO INDUCTOR 6.8MMH
L303	1-408-252-00	MICRO INDUCTOR 3.9MMH
L304	1-408-252-00	MICRO INDUCTOR 3.9MMH
L305	1-408-252-00	MICRO INDUCTOR 3.9MMH
L306	1-408-259-00	MICRO INDUCTOR 15MMH
L401	1-408-259-00	MICRO INDUCTOR 15MMH
L402	1-408-255-00	MICRO INDUCTOR 6.8MMH
L403	1-408-252-00	MICRO INDUCTOR 3.9MMH
L404	1-408-252-00	MICRO INDUCTOR 3.9MMH
L405	1-408-252-00	MICRO INDUCTOR 3.9MMH

See page 3.

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SEMICONDUCTORS

In each case, U : μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC,
UPD...: μPD...

ELECTRICAL PARTS

Ref.No.	Part No.	Description
L406	1-408-259-00	MICRO INDUCTOR 15MMH
L501	1-407-177-XX	MICRO INDUCTOR 470UH
L502	1-407-177-XX	MICRO INDUCTOR 470UH
LPF301	1-231-388-00	FILTER, LOWPASS
LPF401	1-231-388-00	FILTER, LOWPASS
M1	8-835-049-01	MOTOR, DC (DNE-4100A)
M2	X-3575-349-0	MOTOR ASSY, REEL
PL1	1-518-313-00	LAMP, PILOT
PM1	1-454-333-00	SOLENOID, PLUNGER
PM2	1-454-291-00	SOLENOID, PLUNGER
Q101	8-729-663-47	TRANSISTOR 2SC1364
Q102	8-729-663-48	TRANSISTOR 2SC1364-8
Q103	8-729-663-48	TRANSISTOR 2SC1364-8
Q104	8-729-663-48	TRANSISTOR 2SC1364-8
Q105	8-729-663-48	TRANSISTOR 2SC1364-8
Q106	8-729-663-48	TRANSISTOR 2SC1364-8
Q107	8-729-663-48	TRANSISTOR 2SC1364-8
Q108	8-729-663-48	TRANSISTOR 2SC1364-8
Q109	8-729-663-48	TRANSISTOR 2SC1364-8
Q110	8-729-663-48	TRANSISTOR 2SC1364-8
Q201	8-729-663-47	TRANSISTOR 2SC1364
Q202	8-729-663-48	TRANSISTOR 2SC1364-8
Q203	8-729-663-48	TRANSISTOR 2SC1364-8
Q204	8-729-663-48	TRANSISTOR 2SC1364-8
Q205	8-729-663-48	TRANSISTOR 2SC1364-8
Q206	8-729-663-48	TRANSISTOR 2SC1364-8
Q207	8-729-663-48	TRANSISTOR 2SC1364-8
Q208	8-729-663-48	TRANSISTOR 2SC1364-8
Q209	8-729-663-48	TRANSISTOR 2SC1364-8
Q210	8-729-663-48	TRANSISTOR 2SC1364-8
Q301	8-729-334-58	TRANSISTOR 2SC1345
Q302	8-729-663-48	TRANSISTOR 2SC1364-8
Q303	8-729-663-48	TRANSISTOR 2SC1364-8
Q304	8-729-663-48	TRANSISTOR 2SC1364-8
Q305	8-729-663-48	TRANSISTOR 2SC1364-8
Q306	8-729-663-48	TRANSISTOR 2SC1364-8
Q307	8-729-663-48	TRANSISTOR 2SC1364-8
Q308	8-729-663-48	TRANSISTOR 2SC1364-8
Q309	8-729-663-48	TRANSISTOR 2SC1364-8
Q310	8-729-663-48	TRANSISTOR 2SC1364-8
Q311	8-729-663-48	TRANSISTOR 2SC1364-8
Q312	8-729-100-13	TRANSISTOR 2SC2001
Q314	8-729-663-48	TRANSISTOR 2SC1364-8

ELECTRICAL PARTS

Ref.No.	Part No.	Description
Q401	8-729-334-58	TRANSISTOR 2SC1345
Q402	8-729-663-48	TRANSISTOR 2SC1364-8
Q403	8-729-663-48	TRANSISTOR 2SC1364-8
Q404	8-729-663-48	TRANSISTOR 2SC1364-8
Q405	8-729-663-48	TRANSISTOR 2SC1364-8
Q406	8-729-663-48	TRANSISTOR 2SC1364-8
Q407	8-729-663-48	TRANSISTOR 2SC1364-8
Q408	8-729-663-48	TRANSISTOR 2SC1364-8
Q409	8-729-663-48	TRANSISTOR 2SC1364-8
Q410	8-729-663-48	TRANSISTOR 2SC1364-8
Q411	8-729-663-48	TRANSISTOR 2SC1364-8
Q412	8-729-100-13	TRANSISTOR 2SC2001
Q414	8-729-663-48	TRANSISTOR 2SC1364-8
Q501	8-729-203-02	TRANSISTOR 2SK30A-0
Q502	8-729-315-22	TRANSISTOR 2SD1152-E
Q503	8-729-315-22	TRANSISTOR 2SD1152-E
Q504	8-729-141-43	TRANSISTOR 2SD414-Q
Q505	8-729-384-48	TRANSISTOR 2SB864
Q506	8-729-203-02	TRANSISTOR 2SK30A-0
Q507	8-729-384-48	TRANSISTOR 2SB864
Q508	8-729-154-83	TRANSISTOR 2SB548-Q
Q510	8-729-663-47	TRANSISTOR 2SC1364
Q511	8-729-663-47	TRANSISTOR 2SC1364
Q512	8-729-602-67	TRANSISTOR 2SA1026-7
Q513	8-729-602-67	TRANSISTOR 2SA1026-7
Q514	8-729-663-48	TRANSISTOR 2SC1364-8
Q515	8-729-663-48	TRANSISTOR 2SC1364-8
Q601	8-729-288-02	TRANSISTOR 2SD880-0
Q602	8-729-663-47	TRANSISTOR 2SC1364
Q603	8-729-180-93	TRANSISTOR 2SD809-K
Q604	8-729-663-47	TRANSISTOR 2SC1364
Q605	8-729-663-47	TRANSISTOR 2SC1364
Q606	8-729-177-43	TRANSISTOR 2SD774-3
Q607	8-729-177-43	TRANSISTOR 2SD774-3
Q608	8-729-103-43	TRANSISTOR 2SB734-4
Q609	8-729-663-48	TRANSISTOR 2SC1364-8
Q610	8-729-880-82	TRANSISTOR 2SB808-G
Q611	8-729-880-82	TRANSISTOR 2SB808-G
Q612	8-729-811-24	TRANSISTOR 2SD1012
Q613	8-729-811-24	TRANSISTOR 2SD1012
Q614	8-729-663-47	TRANSISTOR 2SC1364
Q615	8-729-180-92	TRANSISTOR 2SD809-K
Q616	8-729-602-67	TRANSISTOR 2SA1026-7
Q617	8-729-663-47	TRANSISTOR 2SC1364
Q618	8-729-663-47	TRANSISTOR 2SC1364

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RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

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- In each case, U: μ , for example:
UA...: μA ..., UPA...: μPA ..., UPC...: μPC ,
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COILS

- MMH: mH, UH: μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
Q619	8-729-103-43	TRANSISTOR 2SB734-4			
Q620	8-729-663-48	TRANSISTOR 2SC1364-8			
Q621	8-729-602-67	TRANSISTOR 2SA1026-7			
Q622	8-729-602-67	TRANSISTOR 2SA1026-7			
Q623	8-729-663-48	TRANSISTOR 2SC1364-8			
Q803	8-729-110-21	TRANSISTOR PH102			
Q1401	8-729-101-31	TRANSISTOR N13T1			
Q1402	8-729-663-48	TRANSISTOR 2SC1364-8			
Q1403	8-729-195-23	TRANSISTOR 2SA952			
Q1404	8-729-195-23	TRANSISTOR 2SA952			
Q1405	8-729-195-23	TRANSISTOR 2SA952			
Q1406	8-729-195-23	TRANSISTOR 2SA952			
R101	1-244-909-00	CARBON	33K	5%	1/2W
R102	1-214-844-00	METAL	150	1%	1/2W
R103	1-214-881-00	METAL	5.1K	1%	1/2W
R104	1-244-924-00	CARBON	130K	5%	1/2W
R105	1-246-473-00	CARBON	1K	5%	1/4W
R106	1-246-497-00	CARBON	10K	5%	1/4W
R108	1-246-507-00	CARBON	27K	5%	1/4W
R109	1-246-481-00	CARBON	2.2K	5%	1/4W
R110	1-244-897-00	CARBON	10K	5%	1/2W
R111	1-246-529-00	CARBON	220K	5%	1/4W
R112	1-244-904-00	CARBON	20K	5%	1/2W
R113	1-246-473-00	CARBON	1K	5%	1/4W
R114	1-246-530-00	CARBON	240K	5%	1/4W
R115	1-246-530-00	CARBON	240K	5%	1/4W
R116	1-214-966-00	METAL	1.2M	1%	1/4W
R117	1-246-513-00	CARBON	47K	5%	1/4W
R118	1-246-497-00	CARBON	10K	5%	1/4W
R119	1-214-758-00	METAL	16K	1%	1/4W
R120	1-246-467-00	CARBON	560	5%	1/4W
R121	1-214-729-00	METAL	1K	1%	1/4W
R122	1-214-766-00	METAL	36K	1%	1/4W
R123	1-246-533-00	CARBON	330K	5%	1/4W
R124	1-246-484-00	CARBON	3K	5%	1/4W
R125	1-246-497-00	CARBON	10K	5%	1/4W
R126	1-214-713-00	METAL	220	1%	1/4W
R127	1-214-131-00	METAL	910	1%	1/4W
R128	1-214-746-00	METAL	5.1K	1%	1/4W
R129	1-246-477-00	CARBON	1.5K	5%	1/4W
R130	1-214-741-00	METAL	3.3K	1%	1/4W
R131	1-214-753-00	METAL	10K	1%	1/4W
R132	1-214-741-00	METAL	3.3K	1%	1/4W
R133	1-246-529-00	CARBON	220K	5%	1/4W
R134	1-246-473-00	CARBON	1K	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R135	1-246-497-00	CARBON	10K	5%	1/4W
R136	1-246-545-00	CARBON	1M	5%	1/4W
R137	1-246-545-00	CARBON	1M	5%	1/4W
R138	1-246-530-00	CARBON	240K	5%	1/4W
R139	1-246-530-00	CARBON	240K	5%	1/4W
R140	1-246-497-00	CARBON	10K	5%	1/4W
R141	1-246-528-00	CARBON	200K	5%	1/4W
R142	1-214-964-00	METAL	1M	1%	1/4W
R143	1-246-445-00	CARBON	68	5%	1/4W
R144	1-246-492-00	CARBON	6.2K	5%	1/4W
R145	1-214-758-00	METAL	16K	1%	1/4W
R146	1-246-436-00	CARBON	30	5%	1/4W
R147	1-246-533-00	CARBON	330K	5%	1/4W
R148	1-246-459-00	CARBON	270	5%	1/4W
R149	1-246-475-00	CARBON	1.2K	5%	1/4W
R150	1-246-461-00	CARBON	330	5%	1/4W
R151	1-246-545-00	CARBON	1M	5%	1/4W
R152	1-246-509-00	CARBON	33K	5%	1/4W
R153	1-246-508-00	CARBON	30K	5%	1/4W
R154	1-246-497-00	CARBON	10K	5%	1/4W
R155	1-246-521-00	CARBON	100K	5%	1/4W
R156	1-246-499-00	CARBON	12K	5%	1/4W
R157	1-246-497-00	CARBON	10K	5%	1/4W
R158	1-246-497-00	CARBON	10K	5%	1/4W
R159	1-246-497-00	CARBON	10K	5%	1/4W
R160	1-246-475-00	CARBON	1.2K	5%	1/4W
R161	1-246-501-00	CARBON	15K	5%	1/4W
R162	1-246-463-00	CARBON	390	5%	1/4W
R164	1-246-511-00	CARBON	39K	5%	1/4W
R165	1-214-964-00	METAL	1M	1%	1/4W
R202	1-214-844-00	METAL	150	1%	1/2W
R203	1-214-881-00	METAL	5.1K	1%	1/2W
R216	1-214-966-00	METAL	1.2M	1%	1/4W
R219	1-214-758-00	METAL	16K	1%	1/4W
R221	1-214-729-00	METAL	1K	1%	1/4W
R222	1-214-766-00	METAL	36K	1%	1/4W
R226	1-214-713-00	METAL	220	1%	1/4W
R227	1-214-131-00	METAL	910	1%	1/4W
R228	1-214-746-00	METAL	5.1K	1%	1/4W
R230	1-214-741-00	METAL	3.3K	1%	1/4W
R231	1-214-753-00	METAL	10K	1%	1/4W
R232	1-214-741-00	METAL	3.3K	1%	1/4W
R242	1-214-964-00	METAL	1M	1%	1/4W
R245	1-214-758-00	METAL	16K	1%	1/4W
R265	1-214-964-00	METAL	1M	1%	1/4W

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF, PF: pF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

SEMICONDUCTORS

- In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC
UPD...: μPD...

COILS

- MMH: mH, UH: μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R301	1-244-909-00	CARBON	33K	5%	1/2W
R302	1-246-473-00	CARBON	1K	5%	1/4W
R303	1-246-489-00	CARBON	4.7K	5%	1/4W
R304	1-244-873-00	CARBON	1K	5%	1/2W
R305	1-246-521-00	CARBON	100K	5%	1/4W
R306	1-246-485-00	CARBON	3.3K	5%	1/4W
R307	1-246-473-00	CARBON	1K	5%	1/4W
R308	1-246-497-00	CARBON	10K	5%	1/4W
R309	1-246-545-00	CARBON	1M	5%	1/4W
R310	1-246-545-00	CARBON	1M	5%	1/4W
R311	1-246-501-00	CARBON	15K	5%	1/4W
R312	1-246-528-00	CARBON	200K	5%	1/4W
R313	1-246-497-00	CARBON	10K	5%	1/4W
R314	1-214-964-00	METAL	1M	1%	1/4W
R315	1-246-445-00	CARBON	68	5%	1/4W
R316	1-246-492-00	CARBON	6.2K	5%	1/4W
R317	1-246-530-00	CARBON	240K	5%	1/4W
R318	1-246-530-00	CARBON	240K	5%	1/4W
R319	1-246-436-00	CARBON	30	5%	1/4W
R320	1-214-758-00	METAL	16K	1%	1/4W
R321	1-246-459-00	CARBON	270	5%	1/4W
R322	1-246-475-00	CARBON	1.2K	5%	1/4W
R323	1-246-461-00	CARBON	330	5%	1/4W
R324	1-246-533-00	CARBON	330K	5%	1/4W
R325	1-246-497-00	CARBON	10K	5%	1/4W
R326	1-246-497-00	CARBON	10K	5%	1/4W
R327	1-246-497-00	CARBON	10K	5%	1/4W
R328	1-246-508-00	CARBON	30K	5%	1/4W
R329	1-246-509-00	CARBON	33K	5%	1/4W
R330	1-246-545-00	CARBON	1M	5%	1/4W
R331	1-246-521-00	CARBON	100K	5%	1/4W
R332	1-246-497-00	CARBON	10K	5%	1/4W
R333	1-246-499-00	CARBON	12K	5%	1/4W
R334	1-246-507-00	CARBON	27K	5%	1/4W
R335	1-246-473-00	CARBON	1K	5%	1/4W
R336	1-246-497-00	CARBON	10K	5%	1/4W
R337	1-214-966-00	METAL	1.2M	1%	1/4W
R338	1-246-530-00	CARBON	240K	5%	1/4W
R339	1-246-513-00	CARBON	47K	5%	1/4W
R340	1-246-497-00	CARBON	10K	5%	1/4W
R341	1-214-758-00	METAL	16K	1%	1/4W
R342	1-246-475-00	CARBON	1.2K	5%	1/4W
R343	1-246-467-00	CARBON	560	5%	1/4W
R344	1-246-510-00	CARBON	36K	5%	1/4W
R345	1-246-463-00	CARBON	390	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R346	1-246-533-00	CARBON	330K	5%	1/4W
R347	1-246-484-00	CARBON	3K	5%	1/4W
R348	1-246-477-00	CARBON	1.5K	5%	1/4W
R349	1-214-746-00	METAL	5.1K	1%	1/4W
R350	1-214-131-00	METAL	910	1%	1/4W
R351	1-214-713-00	METAL	220	1%	1/4W
R352	1-246-497-00	CARBON	10K	5%	1/4W
R353	1-246-511-00	CARBON	39K	5%	1/4W
R354	1-246-511-00	CARBON	39K	5%	1/4W
R355	1-246-497-00	CARBON	10K	5%	1/4W
R356	1-214-741-00	METAL	3.3K	1%	1/4W
R357	1-246-516-00	CARBON	62K	5%	1/4W
R358	1-246-486-00	CARBON	3.6K	5%	1/4W
R359	1-246-529-00	CARBON	220K	5%	1/4W
R360	1-214-753-00	METAL	10K	1%	1/4W
R361	1-214-741-00	METAL	3.3K	1%	1/4W
R362	1-246-510-00	CARBON	36K	5%	1/4W
R363	1-246-473-00	CARBON	1K	5%	1/4W
R364	1-246-473-00	CARBON	1K	5%	1/4W
R365	1-246-529-00	CARBON	220K	5%	1/4W
R366	1-214-739-00	METAL	2.7K	1%	1/4W
R367	1-246-513-00	CARBON	47K	5%	1/4W
R368	1-246-481-00	CARBON	2.2K	5%	1/4W
R369	1-246-521-00	CARBON	100K	5%	1/4W
R370	1-246-521-00	CARBON	100K	5%	1/4W
R371	1-246-449-00	CARBON	100	5%	1/4W
R372	1-246-501-00	CARBON	15K	5%	1/4W
R373	1-246-497-00	CARBON	10K	5%	1/4W
R374	1-246-493-00	CARBON	6.8K	5%	1/4W
R375	1-246-489-00	CARBON	4.7K	5%	1/4W
R376	1-246-529-00	CARBON	220K	5%	1/4W
R377	1-246-477-00	CARBON	1.5K	5%	1/4W
R378	1-246-487-00	CARBON	3.9K	5%	1/4W
R379	1-246-485-00	CARBON	3.3K	5%	1/4W
R380	1-246-489-00	CARBON	4.7K	5%	1/4W
R381	1-246-467-00	CARBON	560	5%	1/4W
R382	1-246-433-00	CARBON	22	5%	1/4W
R383	1-246-473-00	CARBON	1K	5%	1/4W
R384	1-214-964-00	METAL	1M	1%	1/4W
R386	1-244-881-00	CARBON	2.2K	5%	1/2W
R387	1-246-509-00	CARBON	33K	5%	1/4W
R388	1-246-518-00	CARBON	75K	5%	1/4W
R389	1-246-481-00	CARBON	2.2K	5%	1/4W
R390	1-246-473-00	CARBON	1K	5%	1/4W
R391	1-246-533-00	CARBON	330K	5%	1/4W

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "♦" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF, PF: μF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F: nonflammable

SEMICONDUCTORS

- In each case, U: μ, for example: UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

COILS

- MMH: mH, UH: μH

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R392	1-246-505-00	CARBON	22K	5%	1/4W
R393	1-246-509-00	CARBON	33K	5%	1/4W
R394	1-246-525-00	CARBON	150K	5%	1/4W
R395	1-246-457-00	CARBON	220	5%	1/4W
R396	1-246-529-00	CARBON	220K	5%	1/4W
R397	1-246-493-00	CARBON	6.8K	5%	1/4W
R398	1-246-530-00	CARBON	240K	5%	1/4W
R399	1-244-881-00	CARBON	2.2K	5%	1/2W
R414	1-214-964-00	METAL	1M	1%	1/4W
R420	1-214-758-00	METAL	16K	1%	1/4W
R437	1-214-966-00	METAL	1.2M	1%	1/4W
R441	1-214-758-00	METAL	16K	1%	1/4W
R449	1-214-746-00	METAL	5.1K	1%	1/4W
R450	1-214-131-00	METAL	910	1%	1/4W
R451	1-214-713-00	METAL	220	1%	1/4W
R456	1-214-741-00	METAL	3.3K	1%	1/4W
R460	1-214-753-00	METAL	10K	1%	1/4W
R461	1-214-741-00	METAL	3.3K	1%	1/4W
R466	1-214-739-00	METAL	2.7K	1%	1/4W
R484	1-214-964-00	METAL	1M	1%	1/4W
R501	1-246-465-00	CARBON	470	5%	1/4W
R502	1-246-465-00	CARBON	470	5%	1/4W
R503	1-246-505-00	CARBON	22K	5%	1/4W
R504	1-246-497-00	CARBON	10K	5%	1/4W
R505	1-246-521-00	CARBON	100K	5%	1/4W
R506	1-246-521-00	CARBON	100K	5%	1/4W
R507	1-246-521-00	CARBON	100K	5%	1/4W
R508	1-244-849-00	CARBON	100	5%	1/2W
R509	1-244-849-00	CARBON	100	5%	1/2W
R510	1-244-857-00	CARBON	220	5%	1/2W
R511	1-244-897-00	CARBON	10K	5%	1/2W
R512	1-214-864-00	METAL	1K	1%	1/2W
R513	1-214-870-00	METAL	1.8K	1%	1/2W
R514	1-244-857-00	CARBON	220	5%	1/2W
R515	1-244-897-00	CARBON	10K	5%	1/2W
R516	1-214-864-00	METAL	1K	1%	1/2W
R517	1-214-870-00	METAL	1.8K	1%	1/2W
R518	1-246-513-00	CARBON	47K	5%	1/4W
R519	1-246-505-00	CARBON	22K	5%	1/4W
R520	1-246-505-00	CARBON	22K	5%	1/4W
R521	1-246-513-00	CARBON	47K	5%	1/4W
R522	1-246-500-00	CARBON	13K	5%	1/4W
R523	1-246-496-00	CARBON	9.1K	5%	1/4W
R524	1-246-473-00	CARBON	1K	5%	1/4W
R525	1-246-497-00	CARBON	10K	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R526	1-246-483-00	CARBON	2.7K	5%	1/4W
R527	1-246-500-00	CARBON	13K	5%	1/4W
R531	1-246-465-00	CARBON	470	5%	1/4W
R532	1-246-489-00	CARBON	4.7K	5%	1/4W
R533	1-246-521-00	CARBON	100K	5%	1/4W
R534	1-246-521-00	CARBON	100K	5%	1/4W
R535	1-246-457-00	CARBON	220	5%	1/4W
R536	1-246-521-00	CARBON	100K	5%	1/4W
R537	1-246-497-00	CARBON	10K	5%	1/4W
R538	1-246-497-00	CARBON	10K	5%	1/4W
R539	1-246-521-00	CARBON	100K	5%	1/4W
R540	1-246-497-00	CARBON	10K	5%	1/4W
R541	1-246-467-00	CARBON	560	5%	1/4W
R542	1-246-467-00	CARBON	560	5%	1/4W
R601	1-246-473-00	CARBON	1K	5%	1/4W
R602	1-244-881-00	CARBON	2.2K	5%	1/2W
R603	1-246-473-00	CARBON	1K	5%	1/4W
R604	1-246-533-00	CARBON	330K	5%	1/4W
R605	1-246-465-00	CARBON	470	5%	1/4W
R606	1-246-459-00	CARBON	270	5%	1/4W
R607	1-246-457-00	CARBON	220	5%	1/4W
R608	1-246-466-00	CARBON	510	5%	1/4W
R609	1-246-473-00	CARBON	1K	5%	1/4W
R610	1-246-481-00	CARBON	2.2K	5%	1/4W
R611	1-246-473-00	CARBON	1K	5%	1/4W
R612	1-246-473-00	CARBON	1K	5%	1/4W
R613	1-246-473-00	CARBON	1K	5%	1/4W
R614	1-246-522-00	CARBON	110K	5%	1/4W
R615	1-246-481-00	CARBON	2.2K	5%	1/4W
R617	1-246-505-00	CARBON	22K	5%	1/4W
R618	1-246-505-00	CARBON	22K	5%	1/4W
R619	1-246-505-00	CARBON	22K	5%	1/4W
R620	1-246-505-00	CARBON	22K	5%	1/4W
R621	1-246-505-00	CARBON	22K	5%	1/4W
R622	1-246-505-00	CARBON	22K	5%	1/4W
R623	1-246-505-00	CARBON	22K	5%	1/4W
R624	1-246-497-00	CARBON	10K	5%	1/4W
R625	1-246-497-00	CARBON	10K	5%	1/4W
R626	1-246-489-00	CARBON	4.7K	5%	1/4W
R627	1-246-473-00	CARBON	1K	5%	1/4W
R628	1-246-449-00	CARBON	100	5%	1/4W
R629	1-246-531-00	CARBON	270K	5%	1/4W
R630	1-246-531-00	CARBON	270K	5%	1/4W
R631	1-246-505-00	CARBON	22K	5%	1/4W
R632	1-246-473-00	CARBON	1K	5%	1/4W

NOTE:

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- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF, PF: μμF.

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.
- F: nonflammable

SEMICONDUCTORS

- In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC
UPD...: μPD...

COILS

- MMH: mH, UH: μH

ELECTRICAL PARTS

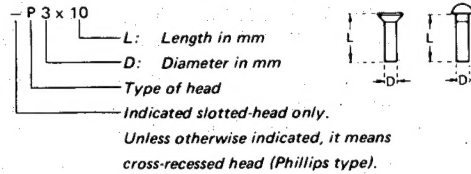
Ref.No.	Part No.	Description				
R633	1-246-497-00	CARBON	10K	5%	1/4W	
R634	1-246-497-00	CARBON	10K	5%	1/4W	
R635	1-246-473-00	CARBON	1K	5%	1/4W	
R636	1-246-521-00	CARBON	100K	5%	1/4W	
R637	1-246-449-00	CARBON	100	5%	1/4W	
R638	1-246-521-00	CARBON	100K	5%	1/4W	
R639	1-246-497-00	CARBON	10K	5%	1/4W	
R640	1-246-497-00	CARBON	10K	5%	1/4W	
R641	1-246-497-00	CARBON	10K	5%	1/4W	
R642	1-246-521-00	CARBON	100K	5%	1/4W	
R643	1-246-473-00	CARBON	1K	5%	1/4W	
R644	A.1-206-470-00	METAL OXIDE	20	5%	2W	F
R645	1-246-473-00	CARBON	1K	5%	1/4W	
R646	1-246-497-00	CARBON	10K	5%	1/4W	
R647	1-246-497-00	CARBON	10K	5%	1/4W	
R648	1-246-473-00	CARBON	1K	5%	1/4W	
R649	1-246-497-00	CARBON	10K	5%	1/4W	
R650	1-246-473-00	CARBON	1K	5%	1/4W	
R651	1-246-473-00	CARBON	1K	5%	1/4W	
R652	1-246-497-00	CARBON	10K	5%	1/4W	
R653	A.1-212-857-00	FUSIBLE	10	5%	1/4W	F
R654	1-246-497-00	CARBON	10K	5%	1/4W	
R655	1-246-475-00	CARBON	1.2K	5%	1/4W	
R657	1-246-470-00	CARBON	750	5%	1/4W	
R658	A.1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R659	1-246-473-00	CARBON	1K	5%	1/4W	
R660	1-246-489-00	CARBON	4.7K	5%	1/4W	
R661	1-246-449-00	CARBON	100	5%	1/4W	
R662	1-246-491-00	CARBON	5.6K	5%	1/4W	
R663	1-246-505-00	CARBON	22K	5%	1/4W	
R664	1-246-505-00	CARBON	22K	5%	1/4W	
R665	1-246-466-00	CARBON	510	5%	1/4W	
R666	1-246-497-00	CARBON	10K	5%	1/4W	
R667	1-246-497-00	CARBON	10K	5%	1/4W	
R668	1-246-505-00	CARBON	22K	5%	1/4W	
R669	1-246-517-00	CARBON	68K	5%	1/4W	
R670	1-246-532-00	CARBON	300K	5%	1/4W	
R902	1-246-525-00	CARBON	150K	5%	1/4W	
R1401	1-246-523-00	CARBON	120K	5%	1/4W	
R1402	1-246-489-00	CARBON	4.7K	5%	1/4W	
R1403	1-246-497-00	CARBON	10K	5%	1/4W	
R1404	1-246-457-00	CARBON	220	5%	1/4W	
R1405	1-246-505-00	CARBON	22K	5%	1/4W	
R1406	1-246-513-00	CARBON	47K	5%	1/4W	
R1407	1-246-441-00	CARBON	47	5%	1/4W	

ELECTRICAL PARTS

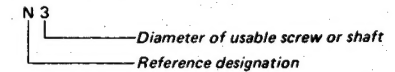
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R1408	1-246-499-00	CARBON	12K	5%	1/4W	
R1409	1-246-465-00	CARBON	470	5%	1/4W	
R1410	1-246-465-00	CARBON	470	5%	1/4W	
R1411	1-246-465-00	CARBON	470	5%	1/4W	
R1412	1-246-465-00	CARBON	470	5%	1/4W	
R1413	1-246-447-00	CARBON	82	5%	1/4W	
R1414	1-246-447-00	CARBON	82	5%	1/4W	
R1415	1-246-447-00	CARBON	82	5%	1/4W	
R1416	1-246-447-00	CARBON	82	5%	1/4W	
R1417	1-246-447-00	CARBON	82	5%	1/4W	
R1418	1-246-447-00	CARBON	82	5%	1/4W	
R1419	1-246-447-00	CARBON	82	5%	1/4W	
R1420	1-246-447-00	CARBON	82	5%	1/4W	
RV101	1-224-645-XX	RES, ADJ, CARBON 10K				
RV201	1-224-645-XX	RES, ADJ, CARBON 10K				
RV301	1-224-646-XX	RES, ADJ, CARBON 22K				
RV302	1-226-236-00	RES, ADJ, CARBON 10K				
RV401	1-224-646-XX	RES, ADJ, CARBON 22K				
RV402	1-226-236-00	RES, ADJ, CARBON 10K				
RV501	1-226-740-00	RES, VAR, CARBON 20K/20K				
RV502	1-226-560-00	RES, VAR, CARBON 5K				
RV503	1-226-980-00	RES, VAR, CARBON 20K/20K				
RV601	1-226-233-00	RES, ADJ, CARBON 1K				
S1	A.1-553-318-00	SWITCH, PUSH (AC POWER)				
S501	1-554-007-12	SWITCH, PUSH				
S502	1-554-007-12	SWITCH, PUSH				
S503	1-554-007-12	SWITCH, PUSH				
S504	1-554-007-12	SWITCH, PUSH				
S505	1-554-381-00	SWITCH, PUSH (3 KEY)				
S506	1-554-381-00	SWITCH, PUSH (3 KEY)				
S507	1-554-381-00	SWITCH, PUSH (3 KEY)				
S508	1-554-275-00	SWITCH, PUSH (1 KEY)				
S601	1-552-809-00	SWITCH, SLIDE				
S602	1-554-380-00	SWITCH, PUSH (1 KEY)				
S701	1-552-539-00	SWITCH, KEY BOARD				
S702	1-552-539-00	SWITCH, KEY BOARD				
S703	1-552-539-00	SWITCH, KEY BOARD				
S704	1-552-539-00	SWITCH, KEY BOARD				
S705	1-552-539-00	SWITCH, KEY BOARD				
S706	1-552-539-00	SWITCH, KEY BOARD				
S707	1-552-539-00	SWITCH, KEY BOARD				
S901	1-552-532-00	SWITCH, PUSH				
S902	1-552-532-00	SWITCH, PUSH				
T1	A.1-447-545-00	(E).....TRANSFORMER, POWER				
T1	A.1-447-546-00	(AEP,UK)....TRANSFORMER, POWER				













HARDWARE NOMENCLATURE














Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	